PGS RbR to L4 traceability (1 of 156)

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0140#A	The PGS shall provide tools to help the PGS staff create and modify SDPS plans, schedules, and lists.		S-PLS-00430	A	The PLANG CI shall support the capability to (a) allow (authorized) operations staff updates (enter / modify / delete) of PGE information in the Planning PGE information database, (b) maintain a record of updates made.
			S-PLS-00450	A	The PLANG CI shall support the capability that allows the operations staff to update (enter/ modify/ delete) the Production Rules (via GUI).
			S-PLS-00670	A	The PLANG CI shall provide (to the operations staff) the capability to enter, via GUI, "plan creation requests" that initiate creation of Candidate Plans.
			S-PLS-00680	A	The PLANG CI shall provide the capability to generate multiple Candidate Plans.
			S-PLS-01200	A	The PLANG CI shall provide the operations staff with the capability to perform the following on-line functions, via GUI: a. Entry of product requests for standard products, b. Query / update / cancellation of production requests for standard products, c. Query status of production requests, d. Query / update of production rules and PGE information, e. Entry of plan creation requests, f. Entry of plan activation requests, g. Entry of plan cancellation requests, h. Query candidate / active plans and corresponding status, i. Entry of requests for processing log reports / production and data processing request status reports / resource utilization reports / planning workload status reports / management reports, j. Entry of ground events, k. Query / update of ground events.
PGS-0140#B	The PGS shall provide tools to help the PGS staff create and modify SDPS plans, schedules, and lists.		S-PLS-00430	A	The PLANG CI shall support the capability to (a) allow (authorized) operations staff updates (enter / modify / delete) of PGE information in the Planning PGE information database, (b) maintain a record of updates made.
			S-PLS-00450	A	The PLANG CI shall support the capability that allows the operations staff to update (enter/ modify/ delete) the Production Rules (via GUI).

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-00670	A	The PLANG CI shall provide (to the operations staff) the capability to enter, via GUI, "plan creation requests" that initiate creation of Candidate Plans.
			S-PLS-00680	A	The PLANG CI shall provide the capability to generate multiple Candidate Plans.
			S-PLS-01200	A	The PLANG CI shall provide the operations staff with the capability to perform the following on-line functions, via GUI: a. Entry of product requests for standard products, b. Query / update / cancellation of production requests for standard products, c. Query status of production requests, d. Query / update of production rules and PGE information, e. Entry of plan creation requests, f. Entry of plan activation requests, g. Entry of plan cancellation requests, h. Query candidate / active plans and corresponding status, i. Entry of requests for processing log reports / production and data processing request status reports / resource utilization reports / planning workload status reports / management reports, j. Entry of ground events, k. Query / update of ground events.
			S-PLS-00455	B	The PLANG CI shall support the capability that allows the operations staff to update (enter/ modify/ delete) the Production Strategies (via GUI).
PGS-0150#B	The PGS shall receive from the collocated DADS data availability schedules for remote DADS, SDPF, the IPs, the ADCs and ODCs.	ASTER GDS interfaces to EDC DAAC only. A & B: ONLY THE GSFC AND LARC DAACS WILL INTERFACE WITH EDOS	S-PLS-00631	B	The PLANG CI shall receive Data Availability Schedule Notices indicating arrival of Data Availability Schedules (DAS) for any remote ECS site, any IP, and any ODC that makes a Data Availability Schedules available.
			S-PLS-00651	B	The PLANG CI shall accept Data Availability Schedules (DAS), for remote ECS sites, IPs, and ODCs, based on the Data Availability Schedule Notices received.
			S-PLS-00665	B	The PLANG CI shall notify the operations staff (via GUI), about the arrival of any Data Availability Schedule Notice corresponding to a DAS.
			S-PLS-00720	B	The PLANG CI shall create a Candidate Plan based on the data availability schedules for remote ECS sites, EDOS, the IPs, and ODCs, as needed.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-00850	B	The PLANG CI shall have the capability to generate data availability schedules (and the corresponding metadata) that reflect the Data Products expected to be generated in the Production Plan.
			S-PLS-00860	B	The PLANG CI shall send the data availability schedules and the corresponding metadata to the designated Data Server.
PGS-0160#A	The PGS shall receive standing orders, changes to standing orders, and product requests from the IMS.		S-PLS-00010	A	The PLANG CI shall accept Production Requests for specific Data Products with associated time windows that are to be routinely generated.
			S-PLS-00040	A	The PLANG CI shall reject a Production Request if an invalid product identifier has been specified.
			S-PLS-00050	A	The PLANG CI shall reject a Production Request if an unauthorized User Identifier is specified.
			S-PLS-00180	A	The PLANG CI shall validate updates (modifications / cancellations) to existing Production Requests.
			S-PLS-00200	A	The PLANG CI shall accept updates (modifications / cancellations) to Production Requests entered by the operations staff.
			S-PLS-01200	A	The PLANG CI shall provide the operations staff with the capability to perform the following on-line functions, via GUI: a. Entry of product requests for standard products, b. Query / update / cancellation of production requests for standard products, c. Query status of production requests, d. Query / update of production rules and PGE information, e. Entry of plan creation requests, f. Entry of plan activation requests, g. Entry of plan cancellation requests, h. Query candidate / active plans and corresponding status, i. Entry of requests for processing log reports / production and data processing request status reports / resource utilization reports / planning workload status reports / management reports, j. Entry of ground events, k. Query / update of ground events.
			S-DPS-20330	A	The PRONG CI shall accept a Cancel Data Processing Request message to delete a Data Processing Request from the Processing Queue.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-20340	A	The PRONG CI shall reject a Cancel Data Processing Request if the Cancel Data Processing Request is received from an unauthorized source.
			S-DPS-20400	A	The PRONG CI shall accept a Data Processing Request (DPR) that requests the execution of a PGE.
			S-DPS-20410	A	The PRONG CI shall validate the information associated with the Data Processing Request.
			S-DPS-20420	A	The PRONG CI shall reject a Data Processing Request if the Data Processing Request is received from an unauthorized source.
			S-DPS-20430	A	The PRONG CI shall take a pre-determined error recovery action if the PGE identified in the Data Processing Request is not available for execution.
PGS-0160#B	The PGS shall receive standing orders, changes to standing orders, and product requests from the IMS.		S-PLS-00010	A	The PLANG CI shall accept Production Requests for specific Data Products with associated time windows that are to be routinely generated.
			S-PLS-00040	A	The PLANG CI shall reject a Production Request if an invalid product identifier has been specified.
			S-PLS-00050	A	The PLANG CI shall reject a Production Request if an unauthorized User Identifier is specified.
			S-PLS-00180	A	The PLANG CI shall validate updates (modifications / cancellations) to existing Production Requests.
			S-PLS-00200	A	The PLANG CI shall accept updates (modifications / cancellations) to Production Requests entered by the operations staff.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-01200	A	The PLANG CI shall provide the operations staff with the capability to perform the following on-line functions, via GUI: a. Entry of product requests for standard products, b. Query / update / cancellation of production requests for standard products, c. Query status of production requests, d. Query / update of production rules and PGE information, e. Entry of plan creation requests, f. Entry of plan activation requests, g. Entry of plan cancellation requests, h. Query candidate / active plans and corresponding status, i. Entry of requests for processing log reports / production and data processing request status reports / resource utilization reports / planning workload status reports / management reports, j. Entry of ground events, k. Query / update of ground events.
			S-DPS-20330	A	The PRONG CI shall accept a Cancel Data Processing Request message to delete a Data Processing Request from the Processing Queue.
			S-DPS-20340	A	The PRONG CI shall reject a Cancel Data Processing Request if the Cancel Data Processing Request is received from an unauthorized source.
			S-DPS-20400	A	The PRONG CI shall accept a Data Processing Request (DPR) that requests the execution of a PGE.
			S-DPS-20410	A	The PRONG CI shall validate the information associated with the Data Processing Request.
			S-DPS-20420	A	The PRONG CI shall reject a Data Processing Request if the Data Processing Request is received from an unauthorized source.
			S-DPS-20430	A	The PRONG CI shall take a pre-determined error recovery action if the PGE identified in the Data Processing Request is not available for execution.
			S-PLS-00070	B	The PLANG CI shall accept Production Requests for reprocessing of Data Products from currently available input data.
			S-PLS-00100	B	The PLANG CI shall accept Production Requests for On-Demand Data Products.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-00110	B	The PLANG CI shall reject a Production Request for On-Demand Data Products if the processing completion deadline (specified in the Production Request) cannot be met.
			S-PLS-00120	B	The PLANG CI shall validate Production Requests for On-Demand Data Products against a pre-approved list of acceptance criteria.
			S-PLS-00150	B	The PLANG CI shall defer On-Demand Production Requests for future plan generation consideration when these On-Demand Production Requests are estimated to exceed a predefined resource threshold.
			S-PLS-00160	B	If a Production Request for an On-Demand Data Product exceeds a predefined resource usage threshold, the PLANG CI shall notify the operations staff that the Production Request has been deferred.
			S-PLS-00165	B	The PLANG CI shall allow the operator to specify the resource usage thresholds used to accept or defer On-Demand Production Requests.
			S-PLS-00170	B	The PLANG CI shall accept updates (modifications/ cancellations) to Production Requests for On-Demand Data Products.
			S-PLS-01210	B	The PLANG CI shall provide the operations staff with the capability to perform the following on-line functions, via GUI: a. Entry/query/update/ cancellation of Production Requests for Reprocessing, b. Query/update/cancellation of Production Requests for On-Demand Data Products.
PGS-0165#A	The PGS shall accept priority processing requests from the IMS.		S-PLS-00005	A	The PLANG CI shall accept priority Production Requests for the generation of specific Data Products.
PGS-0165#B	The PGS shall accept priority processing requests from the IMS.		S-PLS-00005	A	The PLANG CI shall accept priority Production Requests for the generation of specific Data Products.
			S-PLS-00070	B	The PLANG CI shall accept Production Requests for reprocessing of Data Products from currently available input data.
			S-PLS-00100	B	The PLANG CI shall accept Production Requests for On-Demand Data Products.
			S-PLS-00110	B	The PLANG CI shall reject a Production Request for On-Demand Data Products if the processing completion deadline (specified in the Production Request) cannot be met.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-00120	B	The PLANG CI shall validate Production Requests for On-Demand Data Products against a pre-approved list of acceptance criteria.
PGS-0170#A	The PGS shall receive priority assignments, schedule conflict resolutions, and other operational directives.	A: Schedule conflict resolution locally @ DAAC.	S-PLS-00005	A	The PLANG CI shall accept priority Production Requests for the generation of specific Data Products.
			S-PLS-00440	A	The PLANG CI shall maintain Production Rules that define the production strategy (rules defining production priorities and preferences) to be used when preparing a Production Plan.
			S-DPS-22400	A	The PRONG CI shall accept Operations Commands to suspend, resume, or cancel the processing of a Data Processing Request.
			S-DPS-22410	A	The PRONG CI shall accept an Operations Command to modify a Data Processing Request.
PGS-0170#B	The PGS shall receive priority assignments, schedule conflict resolutions, and other operational directives from the SMC.		S-PLS-00005	A	The PLANG CI shall accept priority Production Requests for the generation of specific Data Products.
			S-PLS-00440	A	The PLANG CI shall maintain Production Rules that define the production strategy (rules defining production priorities and preferences) to be used when preparing a Production Plan.
			S-DPS-22400	A	The PRONG CI shall accept Operations Commands to suspend, resume, or cancel the processing of a Data Processing Request.
			S-DPS-22410	A	The PRONG CI shall accept an Operations Command to modify a Data Processing Request.
PGS-0180#A	The PGS shall receive a notice from DADS when data that it has received is available.	A: TRMM and applicable DAACS	S-PLS-00475	A	The PLANG CI shall maintain information on all Candidate and Active Plans generated.
			S-PLS-00875	A	The PLANG CI shall receive Subscription Notices indicating availability of subscribed data.
PGS-0180#B	The PGS shall receive a notice from DADS when data that it has received is available.		S-PLS-00475	A	The PLANG CI shall maintain information on all Candidate and Active Plans generated.
			S-PLS-00875	A	The PLANG CI shall receive Subscription Notices indicating availability of subscribed data.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-00631	B	The PLANG CI shall receive Data Availability Schedule Notices indicating arrival of Data Availability Schedules (DAS) for any remote ECS site, any IP, and any ODC that makes a Data Availability Schedules available.
			S-PLS-00665	B	The PLANG CI shall notify the operations staff (via GUI), about the arrival of any Data Availability Schedule Notice corresponding to a DAS.
PGS-0190#A	The PGS shall coordinate with the DADS on the staging of data for product generation.	A: TRMM and applicable DAACS	S-PLS-00260	A	For each Production Request being processed, the PLANG CI shall interact with the appropriate instance of the SDSRV CI to determine whether the Granules needed to satisfy the request exist.
			S-PLS-00870	A	The operations staff shall manually submit Data Subscriptions for PGE input data to the appropriate Data Servers.
			S-PLS-00872	A	The operations staff shall manually submit Data Subscriptions for L0 data to the Ingest Subsystem.
			S-PLS-00880	A	The operations staff shall manually cancel Data Subscriptions for input data to PGEs that are no longer used, once they determine that the input data is not required by any other PGE.
			S-DPS-20700	A	The PRONG CI shall request data staging by sending a Data Request to the SDSRV CI .
			S-DPS-20710	A	The PRONG CI shall accept a Data Request Status message in response to the Data Request Message.
			S-DPS-20720	A	The Data Request Status message shall inform the PRONG CI on the success or failure of data staging.
			S-DPS-20730	A	The PRONG CI shall provide the capability to terminate the data staging process.
			S-DPS-20740	A	The PRONG CI shall send an Data Request message to the SDSRV CI to terminate the data staging process.
			S-DPS-20750	A	The PRONG CI shall send a Complete Notification Status message to the source of the Data Processing Request if the data staging process was not completed successfully for the Data Processing Request.
			S-DPS-20760	A	The Complete Notification Status message shall contain error information if the message was sent as a result of the failure of data staging.
PGS-0190#B	The PGS shall coordinate with the DADS on the staging of data for product generation.		S-PLS-00260	A	For each Production Request being processed, the PLANG CI shall interact with the appropriate instance of the SDSRV CI to determine whether the Granules needed to satisfy the request exist.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-00870	A	The operations staff shall manually submit Data Subscriptions for PGE input data to the appropriate Data Servers.
			S-PLS-00872	A	The operations staff shall manually submit Data Subscriptions for L0 data to the Ingest Subsystem.
			S-PLS-00880	A	The operations staff shall manually cancel Data Subscriptions for input data to PGEs that are no longer used, once they determine that the input data is not required by any other PGE.
			S-DPS-20700	A	The PRONG CI shall request data staging by sending a Data Request to the SDSRV CI .
			S-DPS-20710	A	The PRONG CI shall accept a Data Request Status message in response to the Data Request Message.
			S-DPS-20720	A	The Data Request Status message shall inform the PRONG CI on the success or failure of data staging.
			S-DPS-20730	A	The PRONG CI shall provide the capability to terminate the data staging process.
			S-DPS-20740	A	The PRONG CI shall send an Data Request message to the SDSRV CI to terminate the data staging process.
			S-DPS-20750	A	The PRONG CI shall send a Complete Notification Status message to the source of the Data Processing Request if the data staging process was not completed successfully for the Data Processing Request.
			S-DPS-20760	A	The Complete Notification Status message shall contain error information if the message was sent as a result of the failure of data staging.
			S-PLS-00465	B	The PLANG shall maintain lists of input Granules in order to support the production of tile or spatial-based output Granules
			S-PLS-00611	B	The operations staff shall manually submit (to the Data Server) Data Subscriptions for the Data Availability Schedules (DAS) of any remote ECS sites, any IP and any ODC that makes a DAS available

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0210#A	The PGS shall maintain an algorithm processing control language capable of constructs (e.g., if-then-else) based on the complexities of the PGS. This control language shall be utilized in conjunction with a database of product specifications that contains the recipe for the generation of all Standard Products allocated to that PGS including, at a minimum: a. The algorithm(s) to be used b. The order in which algorithms are to be executed c. The input data sets required d. Time and other processing resources required	PGE activation rules = scripting language that is managed with the Planning Database.	S-PLS-00400	A	The PLANG CI shall maintain Product Generation Executives (PGEs) information that identifies the Science Software, the order of execution, the conditions for execution, the processing environment, and the input / output data types and locations.
			S-PLS-00410	A	The PLANG CI shall support the capability to display (via GUI) a list of PGEs maintained in its PGE information database.
			S-PLS-00420	A	The PLANG CI shall support the capability to browse (via GUI) the information maintained on a specific PGE.
			S-PLS-00430	A	The PLANG CI shall support the capability to (a) allow (authorized) operations staff updates (enter / modify / delete) of PGE information in the Planning PGE information database, (b) maintain a record of updates made.
			S-PLS-00440	A	The PLANG CI shall maintain Production Rules that define the production strategy (rules defining production priorities and preferences) to be used when preparing a Production Plan.
			S-PLS-00450	A	The PLANG CI shall support the capability that allows the operations staff to update (enter/ modify/ delete) the Production Rules (via GUI).

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-01200	A	The PLANG CI shall provide the operations staff with the capability to perform the following on-line functions, via GUI: a. Entry of product requests for standard products, b. Query / update / cancellation of production requests for standard products, c. Query status of production requests, d. Query / update of production rules and PGE information, e. Entry of plan creation requests, f. Entry of plan activation requests, g. Entry of plan cancellation requests, h. Query candidate / active plans and corresponding status, i. Entry of requests for processing log reports / production and data processing request status reports / resource utilization reports / planning workload status reports / management reports, j. Entry of ground events, k. Query / update of ground events.
PGS-0210#B	The PGS shall maintain an algorithm processing control language capable of constructs (e.g., if-then-else) based on the complexities of the PGS. This control language shall be utilized in conjunction with a database of product specifications that contains the recipe for the generation of all Standard Products allocated to that PGS including, at a minimum: a. The algorithm(s) to be used b. The order in which algorithms are to be executed c. The input data sets required d. Time and other processing resources required	PGE activation rules = scripting language that is managed with the Planning Database.	S-PLS-00400	A	The PLANG CI shall maintain Product Generation Executives (PGEs) information that identifies the Science Software, the order of execution, the conditions for execution, the processing environment, and the input / output data types and locations.
			S-PLS-00410	A	The PLANG CI shall support the capability to display (via GUI) a list of PGEs maintained in its PGE information database.
			S-PLS-00420	A	The PLANG CI shall support the capability to browse (via GUI) the information maintained on a specific PGE.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-00430	A	The PLANG CI shall support the capability to (a) allow (authorized) operations staff updates (enter / modify / delete) of PGE information in the Planning PGE information database, (b) maintain a record of updates made.
			S-PLS-00440	A	The PLANG CI shall maintain Production Rules that define the production strategy (rules defining production priorities and preferences) to be used when preparing a Production Plan.
			S-PLS-00450	A	The PLANG CI shall support the capability that allows the operations staff to update (enter/ modify/ delete) the Production Rules (via GUI).
			S-PLS-01200	A	The PLANG CI shall provide the operations staff with the capability to perform the following on-line functions, via GUI: a. Entry of product requests for standard products, b. Query / update / cancellation of production requests for standard products, c. Query status of production requests, d. Query / update of production rules and PGE information, e. Entry of plan creation requests, f. Entry of plan activation requests, g. Entry of plan cancellation requests, h. Query candidate / active plans and corresponding status, i. Entry of requests for processing log reports / production and data processing request status reports / resource utilization reports / planning workload status reports / management reports, j. Entry of ground events, k. Query / update of ground events.
			S-PLS-00405	B	The PLANG CI shall allow the conditions for execution of Product Generation Executives (PGEs) to include intermediate results such as metadata fields of input data.
			S-PLS-00407	B	The PLANG CI shall maintain Product Generation Executives (PGEs) information necessary to support the production of tile or spatial-based output Granules.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0220#A	The PGS shall create a reprocessing plan containing at a minimum: a. A list of processing tasks needed to carry out each productÍs reprocessing b. Estimated schedule for each task c. The order in which tasks will be executed	A: TRMM - LaRC, MSFC	S-PLS-00020	A	The PLANG CI shall generate Data Processing Requests from Production Requests.
			S-PLS-00475	A	The PLANG CI shall maintain information on all Candidate and Active Plans generated.
			S-PLS-00690	A	The PLANG CI shall create a Candidate Plan specifying a timeline for PGE execution that will satisfy Production Requests for Standard Products.
			S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.
PGS-0220#B	The PGS shall create a reprocessing plan containing at a minimum: a. A list of processing tasks needed to carry out each productÍs reprocessing b. Estimated schedule for each task c. The order in which tasks will be executed		S-PLS-00020	A	The PLANG CI shall generate Data Processing Requests from Production Requests.
			S-PLS-00475	A	The PLANG CI shall maintain information on all Candidate and Active Plans generated.
			S-PLS-00690	A	The PLANG CI shall create a Candidate Plan specifying a timeline for PGE execution that will satisfy Production Requests for Standard Products.
			S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-00070	B	The PLANG CI shall accept Production Requests for reprocessing of Data Products from currently available input data.
			S-PLS-00230	B	The PLANG CI shall provide production rules (via GUI) to break up large reprocessing Production Requests.
			S-PLS-00700	B	The PLANG CI shall create a Candidate Plan specifying a timeline for PGE execution that will satisfy Production Requests for Reprocessing and On-Demand Data Products.
PGS-0230#A	The PGS shall base the PGS reprocessing plan on, at a minimum: a. Requests received from the IMS b. SMC directives c. The Standard Product specifications	Although capability for reprocessing is not implemented until Release B, it is listed here because requirements required to generically "build a plan" would otherwise be untraceable.	S-PLS-00020	A	The PLANG CI shall generate Data Processing Requests from Production Requests.
			S-PLS-00440	A	The PLANG CI shall maintain Production Rules that define the production strategy (rules defining production priorities and preferences) to be used when preparing a Production Plan.
			S-PLS-00450	A	The PLANG CI shall support the capability that allows the operations staff to update (enter/ modify/ delete) the Production Rules (via GUI).
			S-PLS-00690	A	The PLANG CI shall create a Candidate Plan specifying a timeline for PGE execution that will satisfy Production Requests for Standard Products.
			S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0230#B	The PGS shall base the PGS reprocessing plan on, at a minimum: a. Requests received from the IMS b. SMC directives c. The Standard Product specifications	Although capability for reprocessing is not implemented until Release B, it is listed here because requirements required to generically "build a plan" would otherwise be untraceable.	S-PLS-00020	A	The PLANG CI shall generate Data Processing Requests from Production Requests.
			S-PLS-00440	A	The PLANG CI shall maintain Production Rules that define the production strategy (rules defining production priorities and preferences) to be used when preparing a Production Plan.
			S-PLS-00450	A	The PLANG CI shall support the capability that allows the operations staff to update (enter/ modify/ delete) the Production Rules (via GUI).
			S-PLS-00690	A	The PLANG CI shall create a Candidate Plan specifying a timeline for PGE execution that will satisfy Production Requests for Standard Products.
			S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.
			S-PLS-00070	B	The PLANG CI shall accept Production Requests for reprocessing of Data Products from currently available input data.
			S-PLS-00230	B	The PLANG CI shall provide production rules (via GUI) to break up large reprocessing Production Requests.
			S-PLS-00445	B	The PLANG CI shall maintain multiple Production Strategies defined by sets of Production Rules to be used when preparing a Production Plan.
			S-PLS-00700	B	The PLANG CI shall create a Candidate Plan specifying a timeline for PGE execution that will satisfy Production Requests for Reprocessing and On-Demand Data Products.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0240#A	The PGS shall perform reprocessing according to the PGS reprocessing plan and the availability of resources.	Reprocessing capabilities for PRONG exist at RLS A but are not implemented until RLS B when PLANG capability for reprocessing becomes effective in RLS B.	S-PLS-00020	A	The PLANG CI shall generate Data Processing Requests from Production Requests.
			S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.
			S-DPS-20690	A	The PRONG CI shall initiate the data staging process when the disk space required to support successful data staging is available.
			S-DPS-21000	A	The PRONG CI shall initiate execution of a PGE when the following is true: a. When all input data required to execute the PGE is available on local Data Processing subsystem storage resources. b. When the computer hardware resources are available to support execution of a PGE based on the computer hardware resource information associated with the Data Processing Request. c. When the Priority Information associated with the Data Processing Request has been fulfilled. d. When the maximum disk space requirements defined for the PGE are available to support the successful execution of the PGE e. When the maximum memory resources defined for the PGE are available to support the successful execution of the PGE f. When the CPU resources defined for the PGE are available to support the successful execution of the PGE
			S-DPS-21070	A	The PRONG CI shall allocate disk space to support the execution of a PGE.
			S-DPS-21080	A	The PRONG CI shall allocate memory to support the execution of a PGE.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21090	A	The PRONG CI shall allocate CPU to support the execution of a PGE.
PGS-0240#B	The PGS shall perform reprocessing according to the PGS reprocessing plan and the availability of resources.		S-PLS-00020	A	The PLANG CI shall generate Data Processing Requests from Production Requests.
			S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.
			S-DPS-20690	A	The PRONG CI shall initiate the data staging process when the disk space required to support successful data staging is available.
			S-DPS-21000	A	The PRONG CI shall initiate execution of a PGE when the following is true: a. When all input data required to execute the PGE is available on local Data Processing subsystem storage resources. b. When the computer hardware resources are available to support execution of a PGE based on the computer hardware resource information associated with the Data Processing Request. c. When the Priority Information associated with the Data Processing Request has been fulfilled. d. When the maximum disk space requirements defined for the PGE are available to support the successful execution of the PGE e. When the maximum memory resources defined for the PGE are available to support the successful execution of the PGE f. When the CPU resources defined for the PGE are available to support the successful execution of the PGE
			S-DPS-21070	A	The PRONG CI shall allocate disk space to support the execution of a PGE.
			S-DPS-21080	A	The PRONG CI shall allocate memory to support the execution of a PGE.
			S-DPS-21090	A	The PRONG CI shall allocate CPU to support the execution of a PGE.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-20691	B	The PRONG CI shall begin staging data at a time far enough in advance to complete staging of input data prior the predicted start of PGE execution.
			S-DPS-20692	B	The PRONG CI shall not begin staging data too far in advance of PGE execution in such a way that unnecessarily utilizes disk space.
			S-DPS-20693	B	The PRONG CI input data staging shall avoid the creation of deadlock situations.
			S-DPS-20694	B	The PRONG CI shall cancel input data staging if the DPR that initiated the input data staging is canceled.
			S-DPS-20695	B	The PRONG CI shall delete the staged data if the DPR that initiated the input data staging is cancelled and no other DPR needs it.
			S-DPS-20696	B	The PRONG CI shall complete the input data staging and suspend the PGE job if the suspension command is received at the time of data staging.
			S-PLS-00070	B	The PLANG CI shall accept Production Requests for reprocessing of Data Products from currently available input data.
PGS-0250#A	The PGS shall schedule product generation when all inputs required to generate a Standard Product for which there is a current order (from IMS) are available. Entries in the schedule shall contain, at a minimum: a. The product to be generated b. The specific algorithm(s) and calibration coefficients to be used c. The specific data sets needed and their sizes d. Priorities and deadlines that apply to the order for the product		S-PLS-00020	A	The PLANG CI shall generate Data Processing Requests from Production Requests.
			S-PLS-00475	A	The PLANG CI shall maintain information on all Candidate and Active Plans generated.
			S-PLS-00690	A	The PLANG CI shall create a Candidate Plan specifying a timeline for PGE execution that will satisfy Production Requests for Standard Products.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.
			S-PLS-00800	A	The PLANG CI shall provide to the operations staff the capability to enter, via GUI, a "plan activation request" that identifies which Candidate Plan is to be activated.
			S-PLS-00830	A	The PLANG CI shall send Data Processing Requests (specified in an Active Plan) to a processing resource that can perform the processing, if the following applies: a. All required input data (including metadata) is available b. Its input data has passed quality assurance (if applicable)
			S-DPS-20400	A	The PRONG CI shall accept a Data Processing Request (DPR) that requests the execution of a PGE.
PGS-0250#B	The PGS shall schedule product generation when all inputs required to generate a Standard Product for which there is a current order (from IMS) are available. Entries in the schedule shall contain, at a minimum: a. The product to be generated b. The specific algorithm(s) and calibration coefficients to be used c. The specific data sets needed and their sizes d. Priorities and deadlines that apply to the order for the product		S-PLS-00020	A	The PLANG CI shall generate Data Processing Requests from Production Requests.
			S-PLS-00475	A	The PLANG CI shall maintain information on all Candidate and Active Plans generated.
			S-PLS-00690	A	The PLANG CI shall create a Candidate Plan specifying a timeline for PGE execution that will satisfy Production Requests for Standard Products.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.
			S-PLS-00800	A	The PLANG CI shall provide to the operations staff the capability to enter, via GUI, a "plan activation request" that identifies which Candidate Plan is to be activated.
			S-PLS-00830	A	The PLANG CI shall send Data Processing Requests (specified in an Active Plan) to a processing resource that can perform the processing, if the following applies: a. All required input data (including metadata) is available b. Its input data has passed quality assurance (if applicable)
			S-DPS-20400	A	The PRONG CI shall accept a Data Processing Request (DPR) that requests the execution of a PGE.
			S-PLS-00140	B	Upon acceptance of a Production Request for an On-Demand Data Product, the PLANG CI shall immediately forward its corresponding Data Processing Requests to the PRONG CI if predefined resource thresholds are not exceeded and if the input data is available.
			S-PLS-00700	B	The PLANG CI shall create a Candidate Plan specifying a timeline for PGE execution that will satisfy Production Requests for Reprocessing and On-Demand Data Products.
			S-PLS-00720	B	The PLANG CI shall create a Candidate Plan based on the data availability schedules for remote ECS sites, EDOS, the IPs, and ODCs, as needed.
PGS-0260#A	The PGS shall schedule other functions, including, at a minimum: a. File backups b. File maintenance c. Calibration data handling	Calibration data handling can be accomplished through a simple PGE or AI&T. File backup & maintenance handled procedurally using UNIX tools.	S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0260#B	The PGS shall schedule other functions, including, at a minimum: a. File backups b. File maintenance c. Calibration data handling	Calibration data handling can be accomplished through a simple PGE or AI&T. File backup & maintenance handled procedurally using UNIX tools.	S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.
PGS-0270#A	The PGS shall provide the capability to perform the following functions, at a minimum: a. Allocate tasks among processors b. Suspend execution of tasks c. Resume execution of a suspended task d. Cancel execution of tasks e. Request and verify the staging and/or destaging of data stored in the DADS	A Task = PGE; "Allocation of tasks among processors" is supported through resource availablity. A: Cancel execution of tasks.	S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.
			S-PLS-00770	A	The PLANG CI shall provide (to the operations staff) the capability to enter, via GUI, a "Plan cancellation" request, indicating cancellation of the currently Active Plan.
			S-PLS-00780	A	The PLANG CI shall generate Data Processing Request cancellations against previously submitted Data Processing Requests (if so directed by the operations staff), or upon activation of a new plan that no longer requires those requests.
			S-PLS-00790	A	The PLANG CI shall send a Data Processing Request cancellation to the instance of the PRONG CI that received the original Data Processing Request.
			S-DPS-20600	A	The PRONG CI shall be able to determine what data required for PGE execution needs to be staged.
			S-DPS-20610	A	The PRONG CI shall be able to determine that an ECS Data Product required for PGE execution requires staging.
			S-DPS-20620	A	The PRONG CI shall be able to determine that the metadata associated with a ECS Data Product required for PGE execution requires staging.
			S-DPS-20630	A	The PRONG CI shall be able to determine that an Ancillary Data Product required for PGE execution requires staging.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-20640	A	The PRONG CI shall be able to determine that a Special Data Product required for PGE execution requires staging.
			S-DPS-20650	A	The PRONG CI shall be able to determine that a Calibration Coefficient Data File required for PGE execution requires staging.
			S-DPS-20660	A	The PRONG CI shall be able to determine that a PGE requires staging.
			S-DPS-20670	A	The PRONG CI shall be able to determine that metadata associated with a PGE requires staging.
			S-DPS-20680	A	The PRONG CI shall support the movement of data from one Data Processing subsystem controlled storage resource to another Data Processing subsystem controlled storage resource.
			S-DPS-20700	A	The PRONG CI shall request data staging by sending a Data Request to the SDSRV CI .
			S-DPS-20710	A	The PRONG CI shall accept a Data Request Status message in response to the Data Request Message.
			S-DPS-20720	A	The Data Request Status message shall inform the PRONG CI on the success or failure of data staging.
			S-DPS-20730	A	The PRONG CI shall provide the capability to terminate the data staging process.
			S-DPS-20740	A	The PRONG CI shall send an Data Request message to the SDSRV CI to terminate the data staging process.
			S-DPS-20790	A	The PRONG CI shall accept PGEs from the SDSRV CI.
			S-DPS-20800	A	The PRONG CI shall accept Calibration Coefficient data from the SDSRV CI.
			S-DPS-20840	A	The Data Request Status message shall inform the PRONG CI on the success or failure of data destaging.
			S-DPS-21070	A	The PRONG CI shall allocate disk space to support the execution of a PGE.
			S-DPS-21080	A	The PRONG CI shall allocate memory to support the execution of a PGE.
			S-DPS-21090	A	The PRONG CI shall allocate CPU to support the execution of a PGE.
			S-DPS-21550	A	The PRONG CI shall not delete the output data generated by a PGE until the Data Request Status message is received from the SDSRV CI indicating that the output data was successfully copied to the SDSRV CI resources.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21700	A	The operations staff shall have the capability of terminating the data staging process for a Data Processing Request.
			S-DPS-21710	A	The operations staff shall have the capability of terminating the data destaging process for a Data Processing Request.
			S-DPS-21720	A	The operations staff shall have the capability of canceling the processing of a Data Processing Request.
			S-DPS-21960	A	The PRONG CI shall provide a user interface to cancel the processing of a Data Processing Request.
			S-DPS-21970	A	The PRONG CI shall provide a user interface to modify the Priority Information associated with a Data Processing Request.
			S-DPS-21980	A	The PRONG CI shall provide a user interface to modify the information associated with a Data Processing Request.
			S-DPS-21990	A	The PRONG CI shall provide a user interface to suspend the processing of a Data Processing Request.
			S-DPS-22000	A	The PRONG CI shall provide a user interface to resume suspended processing of a Data Processing Request.
			S-DPS-22400	A	The PRONG CI shall accept Operations Commands to suspend, resume, or cancel the processing of a Data Processing Request.
			S-DPS-22410	A	The PRONG CI shall accept an Operations Command to modify a Data Processing Request.
			S-DPS-22480	A	The PRONG CI shall terminate data staging if in progress when the Data Processing Request is canceled.
			S-DPS-22490	A	The PRONG CI shall deallocate the memory which was allocated to the executing PGE associated with the canceled Data Processing Request.
			S-DPS-22500	A	The PRONG CI shall deallocate the disk storage which was allocated to the executing PGE associated with the canceled Data Processing Request.
			S-DPS-22510	A	The PRONG CI shall deallocate the CPU which was allocated to the executing PGE associated with the canceled Data Processing Request.
			S-DPS-22520	A	The PRONG CI shall terminate the execution of the PGE if in progress when the Data Processing Request is canceled.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-22530	A	The PRONG CI shall terminate data destaging if in progress when the Data Processing is canceled.
			S-DPS-61160	IR1	The SPRHW CI POSIX.2 compliant platform shall have the following Unix shells installed at a minimum: C shell, Bourne shell, Korn shell.
			S-DPS-70110	IR1	The operating system for each UNIX platform in the AITHW CI shall conform to the POSIX.2 standard.
			S-DPS-70160	IR1	The AITHW CI POSIX.2 compliant platform shall have the following Unix shells installed at a minimum: C shell, Bourne shell, Korn shell.
			S-DPS-20830	A	The PRONG CI shall send a Data Insert Request message to the SDSRV CI to initiate the destaging of data.
			S-DPS-61110	IR1	The operating system for each Unix platform in the SPRHW CI shall conform to the POSIX.2 standard.
PGS-0270#B	The PGS shall provide the capability to perform the following functions, at a minimum: a. Allocate tasks among processors b. Suspend execution of tasks c. Resume execution of a suspended task d. Cancel execution of tasks e. Request and verify the staging and/or destaging of data stored in the DADS	A Task = PGE; "Allocation of tasks among processors" is supported through resource availablity. B: Suspend/Resume exexution of task.	S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.
			S-PLS-00770	A	The PLANG CI shall provide (to the operations staff) the capability to enter, via GUI, a "Plan cancellation" request, indicating cancellation of the currently Active Plan.
			S-PLS-00780	A	The PLANG CI shall generate Data Processing Request cancellations against previously submitted Data Processing Requests (if so directed by the operations staff), or upon activation of a new plan that no longer requires those requests.
			S-PLS-00790	A	The PLANG CI shall send a Data Processing Request cancellation to the instance of the PRONG CI that received the original Data Processing Request.
			S-DPS-20600	A	The PRONG CI shall be able to determine what data required for PGE execution needs to be staged.
			S-DPS-20840	A	The Data Request Status message shall inform the PRONG CI on the success or failure of data destaging.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-20830	A	The PRONG CI shall send a Data Insert Request message to the SDSRV CI to initiate the destaging of data.
PGS-0285#A	The PGS shall transmit to the IMS a status message to confirm or reject a processing order. The reason for rejection shall be included.	Functionally, IMS is a part of OPS.	S-PLS-00060	A	The PLANG CI shall support the capability to display a response message to the operations staff, indicating the acceptance / rejection status of Production Requests and the reasons for rejection (if applicable).
			S-PLS-00220	A	The PLANG CI shall support the display of a response message to the operations staff, indicating the acceptance /rejection status of updates to a Production Request.
			S-PLS-01200	A	The PLANG CI shall provide the operations staff with the capability to perform the following on-line functions, via GUI: a. Entry of product requests for standard products, b. Query / update / cancellation of production requests for standard products, c. Query status of production requests, d. Query / update of production rules and PGE information, e. Entry of plan creation requests, f. Entry of plan activation requests, g. Entry of plan cancellation requests, h. Query candidate / active plans and corresponding status, i. Entry of requests for processing log reports / production and data processing request status reports / resource utilization reports / planning workload status reports / management reports, j. Entry of ground events, k. Query / update of ground events.
			S-DPS-20510	A	The PRONG CI shall respond to the source of the Data Processing Request with a Data Processing Request Response upon the completion of validation and queue processing.
			S-DPS-20520	A	The Data Processing Request Response shall include a reason for rejection if the Data Processing Request was rejected.
PGS-0285#B	The PGS shall transmit to the IMS a status message to confirm or reject a processing order. The reason for rejection shall be included.	Functionally, IMS is a part of OPS.	S-PLS-00060	A	The PLANG CI shall support the capability to display a response message to the operations staff, indicating the acceptance / rejection status of Production Requests and the reasons for rejection (if applicable).

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-00130	B	The PLANG CI shall send a response message to the Data Server confirming the acceptance status of the received Production Request for On-Demand Data Products (" accepted", "rejected", "deferred") and reason for rejection of a request (if applicable).
			S-PLS-00190	B	The PLANG CI shall forward a response message to the Data Server indicating acceptance / rejection status of the updates to the Production Request for On-Demand Data Products .
			S-PLS-01210	B	The PLANG CI shall provide the operations staff with the capability to perform the following on-line functions, via GUI: a. Entry/query/update/ cancellation of Production Requests for Reprocessing, b. Query/update/cancellation of Production Requests for On-Demand Data Products.
PGS-0290#A	The PGS shall make electronic copies of its plans and schedules available to the IMS, the SMC, and the collocated DADS.		S-PLS-00760	A	The PLANG CI shall send electronic copies of the Candidate Plans and corresponding metadata to the designated local Data Server for storage and distribution.
			S-PLS-00840	A	The PLANG CI shall send electronic copies of the Active Plan and corresponding metadata to the designated local Data Server for storage and distribution.
PGS-0290#B	The PGS shall make electronic copies of its plans and schedules available to the IMS, the SMC, and the collocated DADS.		S-PLS-00760	A	The PLANG CI shall send electronic copies of the Candidate Plans and corresponding metadata to the designated local Data Server for storage and distribution.
			S-PLS-00840	A	The PLANG CI shall send electronic copies of the Active Plan and corresponding metadata to the designated local Data Server for storage and distribution.
			S-PLS-00845	B	The PLANG CI shall support the capability to retrieve stored plans and their corresponding metadata from the Data Server based on specific queries.
PGS-0295#B	The PGS shall transmit a status message notifying the IMS of a revised completion time if processing will not complete per original schedule.	Metadata associated with a plan will indicate a delay in production requests.	S-PLS-01230	B	The PLANG CI shall support the display (via GUI) of warning messages to the operations staff indicating revised completion times if processing will not complete per original schedule.
PGS-0300#A	The PGS shall have the capability for an operator to interactively review and update the current data processing schedule.	"Current data processing schedule" = Active Plan.	S-PLS-00800	A	The PLANG CI shall provide to the operations staff the capability to enter, via GUI, a "plan activation request" that identifies which Candidate Plan is to be activated.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21720	A	The operations staff shall have the capability of canceling the processing of a Data Processing Request.
			S-DPS-21750	A	The operations staff shall have the capability of modifying the information associated with the Data Processing Request.
			S-DPS-21760	A	The operations staff shall have the capability of viewing the Processing Queues.
			S-DPS-21770	A	The operations staff shall have the capability of requesting the status of a Data Processing Request.
			S-DPS-21880	A	The PRONG CI shall provide a User Interface to authorized users.
			S-DPS-21890	A	The PRONG CI shall provide a Processing Queue Display as a visual display of the Processing Queues.
			S-DPS-21900	A	The PRONG CI shall update the Processing Queue Display information when the Processing State of a queued Data Processing Request is modified.
			S-DPS-22010	A	The PRONG CI shall provide a user interface to view the data associated with the Data Processing Request.
			S-DPS-22200	A	The PRONG CI shall accept a Processing Information Request to request the status of a Data Processing Request.
			S-DPS-22210	A	The PRONG CI shall have the capability to provide status for a Data Processing Request.
			S-DPS-22220	A	The PRONG CI shall provide current DPR Processing State data as part of the status information of a Data Processing Request.
			S-DPS-22230	A	The PRONG CI shall provide current queue position as part of the status information of a Data Processing Request.
			S-DPS-22240	A	The PRONG CI shall provide status information for the PGE associated with the Data Processing Request if the PGE is currently executing.
			S-DPS-22250	A	The PRONG CI shall have the capability of receiving the Status Information File of an executing PGE from the Data Processing Subsystem resource executing the PGE.
			S-DPS-22400	A	The PRONG CI shall accept Operations Commands to suspend, resume, or cancel the processing of a Data Processing Request.
			S-DPS-22410	A	The PRONG CI shall accept an Operations Command to modify a Data Processing Request.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-22470	A	The PRONG CI shall update the DPR Processing State to cancel when the Operation Command specifies cancellation.
			S-DPS-22480	A	The PRONG CI shall terminate data staging if in progress when the Data Processing Request is canceled.
			S-DPS-22490	A	The PRONG CI shall deallocate the memory which was allocated to the executing PGE associated with the canceled Data Processing Request.
			S-DPS-22500	A	The PRONG CI shall deallocate the disk storage which was allocated to the executing PGE associated with the canceled Data Processing Request.
			S-DPS-22510	A	The PRONG CI shall deallocate the CPU which was allocated to the executing PGE associated with the canceled Data Processing Request.
			S-DPS-22520	A	The PRONG CI shall terminate the execution of the PGE if in progress when the Data Processing Request is canceled.
			S-DPS-22530	A	The PRONG CI shall terminate data destaging if in progress when the Data Processing is canceled.
			S-DPS-22620	A	The PRONG CI shall update the Priority Information associated with the Data Processing Request with the Priority Information contained in the Operation Command which specifies modify.
			S-DPS-22630	A	The PRONG CI shall perform queue processing for a Data Processing Request which has updated Priority Information.
PGS-0300#B	The PGS shall have the capability for an operator to interactively review and update the current data processing schedule.	"Current data processing schedule" = Active Plan.	S-PLS-00800	A	The PLANG CI shall provide to the operations staff the capability to enter, via GUI, a "plan activation request" that identifies which Candidate Plan is to be activated.
			S-DPS-21720	A	The operations staff shall have the capability of canceling the processing of a Data Processing Request.
			S-DPS-21750	A	The operations staff shall have the capability of modifying the information associated with the Data Processing Request.
			S-DPS-21760	A	The operations staff shall have the capability of viewing the Processing Queues.
			S-DPS-21770	A	The operations staff shall have the capability of requesting the status of a Data Processing Request.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21880	A	The PRONG CI shall provide a User Interface to authorized users.
			S-DPS-21890	A	The PRONG CI shall provide a Processing Queue Display as a visual display of the Processing Queues.
			S-DPS-21900	A	The PRONG CI shall update the Processing Queue Display information when the Processing State of a queued Data Processing Request is modified.
			S-DPS-22010	A	The PRONG CI shall provide a user interface to view the data associated with the Data Processing Request.
			S-DPS-22200	A	The PRONG CI shall accept a Processing Information Request to request the status of a Data Processing Request.
			S-DPS-22210	A	The PRONG CI shall have the capability to provide status for a Data Processing Request.
			S-DPS-22220	A	The PRONG CI shall provide current DPR Processing State data as part of the status information of a Data Processing Request.
			S-DPS-22230	A	The PRONG CI shall provide current queue position as part of the status information of a Data Processing Request.
			S-DPS-22240	A	The PRONG CI shall provide status information for the PGE associated with the Data Processing Request if the PGE is currently executing.
			S-DPS-22250	A	The PRONG CI shall have the capability of receiving the Status Information File of an executing PGE from the Data Processing Subsystem resource executing the PGE.
			S-DPS-22400	A	The PRONG CI shall accept Operations Commands to suspend, resume, or cancel the processing of a Data Processing Request.
			S-DPS-22410	A	The PRONG CI shall accept an Operations Command to modify a Data Processing Request.
			S-DPS-22470	A	The PRONG CI shall update the DPR Processing State to cancel when the Operation Command specifies cancellation.
			S-DPS-22480	A	The PRONG CI shall terminate data staging if in progress when the Data Processing Request is canceled.
			S-DPS-22490	A	The PRONG CI shall deallocate the memory which was allocated to the executing PGE associated with the canceled Data Processing Request.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-22500	A	The PRONG CI shall deallocate the disk storage which was allocated to the executing PGE associated with the canceled Data Processing Request.
			S-DPS-22510	A	The PRONG CI shall deallocate the CPU which was allocated to the executing PGE associated with the canceled Data Processing Request.
			S-DPS-22520	A	The PRONG CI shall terminate the execution of the PGE if in progress when the Data Processing Request is canceled.
			S-DPS-22530	A	The PRONG CI shall terminate data destaging if in progress when the Data Processing is canceled.
			S-DPS-22620	A	The PRONG CI shall update the Priority Information associated with the Data Processing Request with the Priority Information contained in the Operation Command which specifies modify.
			S-DPS-22630	A	The PRONG CI shall perform queue processing for a Data Processing Request which has updated Priority Information.
			S-DPS-21730	B	The operations staff shall have the capability to suspend the processing of a Data Processing Request.
			S-DPS-21740	B	The operations staff shall have the capability to resume suspended processing of a Data Processing Request.
			S-DPS-22560	B	The PRONG CI shall update the Processing State to suspend when the Operation Command specifies suspension.
			S-DPS-22590	B	The PRONG CI shall not perform any further processing on a Data Processing Request which is suspended.
			S-DPS-22600	B	The PRONG CI shall reject the Operation Command which specified a resume if the Data Processing Request was not suspended.
			S-DPS-22611	B	When the resume Operation Command is used to resume processing for a Data Processing Request, the PRONG CI shall update the Processing State to the previous Processing State before the suspension.
			S-PLS-00811	B	The PLANG CI shall reconcile any outstanding Data Processing Requests in the current Active Plan with the Data Processing Requests in the Candidate Plan to be activated.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0310#A	The PGS element shall collect the management data used to support the following system management functions: a. Fault Management b. Configuration Management c. Accounting Management d. Accountability Management e. Performance Management f. Security Management g. Scheduling Management.		C-MSS-10200	A	The MSS shall interface with the SDPS subsystems to exchange the data items in Table 5.1-2 as specified in the ECS internal ICDs, 313-DV3-003.
			S-PLS-01440	A	The PLANG CI shall collect Fault Management Data and provide it to the MSS.
			S-PLS-01450	A	The PLANG CI shall collect Configuration Management Data and provide it to the MSS.
			S-PLS-01470	A	The PLANG CI shall collect Accountability Management Data and provide it to the MSS.
			S-PLS-01480	A	The PLANG CI shall collect Performance Management Data and provide it to the MSS.
			S-PLS-01490	A	The PLANG CI shall collect Security Management Data and provide it to the MSS.
			S-PLS-01500	A	The PLANG CI shall collect Scheduling Management Data and provide it to the MSS.
			S-DPS-20100	A	The PRONG CI shall request information about the health and availability of a Hardware Resource by using a Systems Management Subsystem (MSS) provided Resource Management API (Application Program Interface).
			S-DPS-20120	A	The PRONG CI shall inform the MSS using a MSS provided Fault Management API when a fault attributed to a MSS managed resource has occurred.
			S-DPS-20130	A	The PRONG CI shall provide Fault Management data to the MSS using a MSS provided Fault Management API.
			S-DPS-20140	A	The PRONG CI shall provide Performance Management data to the MSS using a MSS provided Performance Management API.
			S-DPS-20170	A	The operations staff shall have the capability to modify the configuration of Data Processing subsystem Hardware resources.
			S-DPS-20180	A	The PRONG CI shall provide an interface to support the modification of the configuration of the Data Processing subsystem Hardware resources.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-20190	A	The PRONG CI shall have the capability to modify the configuration of the Data Processing subsystem Hardware resources.
			S-DPS-20210	A	The PRONG CI shall have the capability to determine the Operational state of a Hardware or Software component.
			S-DPS-20220	A	The operations staff shall have the capability to request a Data Processing Subsystem Resource Utilization Report from the MSS based on time span, resource classification, or operational role.
			S-DPS-20230	A	The PRONG CI shall provide Security Management data to the MSS using a MSS provided Security Management API.
			S-DPS-20240	A	The PRONG CI shall provide Scheduling Management data to the MSS using a MSS provided Scheduling Management API.
			S-DPS-21210	A	The PRONG CI shall monitor the use of disk space by a PGE during execution.
			S-DPS-60160	A	The SPRHW CI shall support collection and maintenance for Fault Management, configuration, performance, accountability, and security of Processing CI hardware resources.
PGS-0310#B	The PGS element shall collect the management data used to support the following system management functions: a. Fault Management b. Configuration Management c. Accounting Management d. Accountability Management e. Performance Management f. Security Management g. Scheduling Management.		S-PLS-01440	A	The PLANG CI shall collect Fault Management Data and provide it to the MSS.
			S-PLS-01450	A	The PLANG CI shall collect Configuration Management Data and provide it to the MSS.
			S-PLS-01470	A	The PLANG CI shall collect Accountability Management Data and provide it to the MSS.
			S-PLS-01480	A	The PLANG CI shall collect Performance Management Data and provide it to the MSS.
			S-PLS-01490	A	The PLANG CI shall collect Security Management Data and provide it to the MSS.
			S-PLS-01500	A	The PLANG CI shall collect Scheduling Management Data and provide it to the MSS.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-20100	A	The PRONG CI shall request information about the health and availability of a Hardware Resource by using a Systems Management Subsystem (MSS) provided Resource Management API (Application Program Interface).
			S-DPS-20120	A	The PRONG CI shall inform the MSS using a MSS provided Fault Management API when a fault attributed to a MSS managed resource has occurred.
			S-DPS-20130	A	The PRONG CI shall provide Fault Management data to the MSS using a MSS provided Fault Management API.
			S-DPS-20140	A	The PRONG CI shall provide Performance Management data to the MSS using a MSS provided Performance Management API.
			S-DPS-20160	A	The PRONG CI shall provide Accountability Management data to the MSS using a MSS provided Accountability Management API.
			S-DPS-20170	A	The operations staff shall have the capability to modify the configuration of Data Processing subsystem Hardware resources.
			S-DPS-20180	A	The PRONG CI shall provide an interface to support the modification of the configuration of the Data Processing subsystem Hardware resources.
			S-DPS-20210	A	The PRONG CI shall have the capability to determine the Operational state of a Hardware or Software component.
			S-DPS-20220	A	The operations staff shall have the capability to request a Data Processing Subsystem Resource Utilization Report from the MSS based on time span, resource classification, or operational role.
			S-DPS-20230	A	The PRONG CI shall provide Security Management data to the MSS using a MSS provided Security Management API.
			S-DPS-20240	A	The PRONG CI shall provide Scheduling Management data to the MSS using a MSS provided Scheduling Management API.
			S-DPS-21210	A	The PRONG CI shall monitor the use of disk space by a PGE during execution.
			S-DPS-42370	IR1	The operations staff shall collect during I&T the performance and resource utilization information needed for entry into or update of the PGE data base.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-60160	A	The SPRHW CI shall support collection and maintenance for Fault Management, configuration, performance, accountability, and security of Processing CI hardware resources.
			S-DPS-20191	B	The PRONG CI shall have the capability to modify the configuration settings of the Data Processing subsystem Hardware resources.
			S-DPS-20200	B	The PRONG CI shall provide Configuration Management data to the MSS using a MSS provided Configuration Management API.
			S-DPS-42365	B	The operations staff shall have the capability to use MSS profiling capabilities to determine the computing resources utilized by the execution of a chain of PGEs.
			S-PLS-01460	B	The PLANG CI shall collect Accounting Management Data and provide it to the MSS.
PGS-0320#A	The PGS shall display detected faults to the system operators.	Faults = errors such as: data staging/destaging, PGE execution queue processing, etc.	S-PLS-01240	A	The PLANG CI shall support the display (via GUI) of Planning hardware and software detected faults to the operations staff.
			S-DPS-20460	A	The PRONG CI shall take a pre-determined error recovery action if the resource which maintains the input data is not available for data staging.
			S-DPS-20470	A	The PRONG CI shall take a pre-determined error recovery action if the resource identified as the recipient of the Output Data is not available for data destaging.
			S-DPS-20480	A	The PRONG CI shall take a pre-determined error recovery action if the computer resource required to execute the PGE is not available.
			S-DPS-21880	A	The PRONG CI shall provide a User Interface to authorized users.
			S-DPS-21910	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the queue processing of a Data Processing Request.
			S-DPS-21920	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the data staging process.
			S-DPS-21930	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the execution of a PGE.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21940	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the data destaging process.
PGS-0320#B	The PGS shall display detected faults to the system operators.	Faults = errors such as: data staging/destaging, PGE execution queue processing, etc.	S-PLS-01240	A	The PLANG CI shall support the display (via GUI) of Planning hardware and software detected faults to the operations staff.
			S-DPS-20460	A	The PRONG CI shall take a pre-determined error recovery action if the resource which maintains the input data is not available for data staging.
			S-DPS-20470	A	The PRONG CI shall take a pre-determined error recovery action if the resource identified as the recipient of the Output Data is not available for data destaging.
			S-DPS-20480	A	The PRONG CI shall take a pre-determined error recovery action if the computer resource required to execute the PGE is not available.
			S-DPS-21880	A	The PRONG CI shall provide a User Interface to authorized users.
			S-DPS-21910	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the queue processing of a Data Processing Request.
			S-DPS-21920	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the data staging process.
			S-DPS-21930	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the execution of a PGE.
			S-DPS-21940	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the data destaging process.
PGS-0325#A	The PGS shall provide the SMC with scheduling and status information.		S-PLS-00470	A	The PLANG CI shall maintain information on the following: a. current processing status of all Production Requests received, b. current processing status of all Data Processing Requests generated, c. detected processing fault data.
			S-PLS-01430	A	The PLANG CI shall send to MSS product scheduling, processing status and data quality information.
			S-DPS-22200	A	The PRONG CI shall accept a Processing Information Request to request the status of a Data Processing Request.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-22210	A	The PRONG CI shall have the capability to provide status for a Data Processing Request.
			S-DPS-22220	A	The PRONG CI shall provide current DPR Processing State data as part of the status information of a Data Processing Request.
			S-DPS-22230	A	The PRONG CI shall provide current queue position as part of the status information of a Data Processing Request.
			S-DPS-22240	A	The PRONG CI shall provide status information for the PGE associated with the Data Processing Request if the PGE is currently executing.
			S-DPS-22250	A	The PRONG CI shall have the capability of receiving the Status Information File of an executing PGE from the Data Processing Subsystem resource executing the PGE.
PGS-0325#B	The PGS shall provide the SMC with scheduling and status information.		S-PLS-00470	A	The PLANG CI shall maintain information on the following: a. current processing status of all Production Requests received, b. current processing status of all Data Processing Requests generated, c. detected processing fault data.
			S-PLS-01430	A	The PLANG CI shall send to MSS product scheduling, processing status and data quality information.
			S-DPS-22200	A	The PRONG CI shall accept a Processing Information Request to request the status of a Data Processing Request.
			S-DPS-22210	A	The PRONG CI shall have the capability to provide status for a Data Processing Request.
			S-DPS-22220	A	The PRONG CI shall provide current DPR Processing State data as part of the status information of a Data Processing Request.
			S-DPS-22230	A	The PRONG CI shall provide current queue position as part of the status information of a Data Processing Request.
			S-DPS-22240	A	The PRONG CI shall provide status information for the PGE associated with the Data Processing Request if the PGE is currently executing.
			S-DPS-22250	A	The PRONG CI shall have the capability of receiving the Status Information File of an executing PGE from the Data Processing Subsystem resource executing the PGE.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0330#A	The PGS shall report detected processing system faults to the SMC.	Processing system faults = errors such as data staging/destaging, PGE execution, queue processing, etc.	S-PLS-01410	A	The PLANG CI shall forward faults detected in the Planning system to MSS.
			S-PLS-01440	A	The PLANG CI shall collect Fault Management Data and provide it to the MSS.
			S-DPS-20120	A	The PRONG CI shall inform the MSS using a MSS provided Fault Management API when a fault attributed to a MSS managed resource has occurred.
			S-DPS-20130	A	The PRONG CI shall provide Fault Management data to the MSS using a MSS provided Fault Management API.
			S-DPS-20210	A	The PRONG CI shall have the capability to determine the Operational state of a Hardware or Software component.
			S-DPS-20460	A	The PRONG CI shall take a pre-determined error recovery action if the resource which maintains the input data is not available for data staging.
			S-DPS-20470	A	The PRONG CI shall take a pre-determined error recovery action if the resource identified as the recipient of the Output Data is not available for data destaging.
PGS-0330#B	The PGS shall report detected processing system faults to the SMC.	Processing system faults = errors such as data staging/destaging, PGE execution, queue processing, etc.	S-PLS-01410	A	The PLANG CI shall forward faults detected in the Planning system to MSS.
			S-PLS-01440	A	The PLANG CI shall collect Fault Management Data and provide it to the MSS.
			S-DPS-20120	A	The PRONG CI shall inform the MSS using a MSS provided Fault Management API when a fault attributed to a MSS managed resource has occurred.
			S-DPS-20130	A	The PRONG CI shall provide Fault Management data to the MSS using a MSS provided Fault Management API.
			S-DPS-20210	A	The PRONG CI shall have the capability to determine the Operational state of a Hardware or Software component.
			S-DPS-20460	A	The PRONG CI shall take a pre-determined error recovery action if the resource which maintains the input data is not available for data staging.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-20470	A	The PRONG CI shall take a pre-determined error recovery action if the resource identified as the recipient of the Output Data is not available for data destaging.
			C-MSS-36215	B	The Management Agent Service shall have the capability to receive event notification from the CLS.
			C-MSS-36310	B	The Management Agent Service shall have the capability to receive detected hardware and software fault information from the IOS.
			C-MSS-36360	B	The Management Agent Service shall have the capability to receive detected hardware and software fault information from the DMS.
			C-MSS-36410	B	The Management Agent Service shall have the capability to receive detected hardware and software fault information from the PLS.
			C-MSS-36460	B	The Management Agent Service shall have the capability to receive detected hardware and software fault information from the DPS.
			C-MSS-36510	B	The Management Agent Service shall have the capability to receive detected hardware and software fault information from the INS.
			C-MSS-36560	B	The Management Agent Service shall have the capability to receive detected hardware and software fault information from the DSS.
			C-MSS-36710	B	The Management Agent Service shall have the capability to receive detected hardware and software fault information from the CSS.
PGS-0340#A	The PGS shall utilize fault isolation tools provided by the LSM for the PGS and its subsystems.	"PGS and its subsystems" = PDPS, LSM = MSS (MSS provides the tools used for fault detections).	S-PLS-00470	A	The PLANG CI shall maintain information on the following: a. current processing status of all Production Requests received, b. current processing status of all Data Processing Requests generated, c. detected processing fault data.
			S-PLS-00490	A	The PLANG CI shall maintain Planning system fault data using fault isolation tools provided by the LSM.
			S-PLS-01400	A	The PLANG CI shall accept the fault isolation tools for the PLANG CI.
			S-PLS-01440	A	The PLANG CI shall collect Fault Management Data and provide it to the MSS.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-20100	A	The PRONG CI shall request information about the health and availability of a Hardware Resource by using a Systems Management Subsystem (MSS) provided Resource Management API (Application Program Interface).
			S-DPS-20120	A	The PRONG CI shall inform the MSS using a MSS provided Fault Management API when a fault attributed to a MSS managed resource has occurred.
			S-DPS-20130	A	The PRONG CI shall provide Fault Management data to the MSS using a MSS provided Fault Management API.
			S-DPS-20210	A	The PRONG CI shall have the capability to determine the Operational state of a Hardware or Software component.
			S-DPS-20460	A	The PRONG CI shall take a pre-determined error recovery action if the resource which maintains the input data is not available for data staging.
			S-DPS-20470	A	The PRONG CI shall take a pre-determined error recovery action if the resource identified as the recipient of the Output Data is not available for data destaging.
			S-DPS-21220	A	The PRONG CI shall take a predetermined error recovery action if the maximum disk space requirements defined for that PGE has been exceeded by an adaptable percentage value.
			S-DPS-21230	A	The PRONG CI shall take a predetermined error recovery action if the maximum CPU time requirements defined for that PGE has been exceeded by an adaptable percentage value.
			S-DPS-21240	A	The PRONG CI shall take a predetermined error recovery action if the maximum memory usage requirements defined for that PGE has been exceeded by an adaptable percentage value.
PGS-0340#B	The PGS shall utilize fault isolation tools provided by the LSM for the PGS and its subsystems.	"PGS and its subsystems" = PDPS, LSM = MSS (MSS provides the tools used for fault detections).	S-PLS-00470	A	The PLANG CI shall maintain information on the following: a. current processing status of all Production Requests received, b. current processing status of all Data Processing Requests generated, c. detected processing fault data.
			S-PLS-00490	A	The PLANG CI shall maintain Planning system fault data using fault isolation tools provided by the LSM.
			S-PLS-01400	A	The PLANG CI shall accept the fault isolation tools for the PLANG CI.
			S-PLS-01440	A	The PLANG CI shall collect Fault Management Data and provide it to the MSS.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-20100	A	The PRONG CI shall request information about the health and availability of a Hardware Resource by using a Systems Management Subsystem (MSS) provided Resource Management API (Application Program Interface).
			S-DPS-20120	A	The PRONG CI shall inform the MSS using a MSS provided Fault Management API when a fault attributed to a MSS managed resource has occurred.
			S-DPS-20130	A	The PRONG CI shall provide Fault Management data to the MSS using a MSS provided Fault Management API.
			S-DPS-20210	A	The PRONG CI shall have the capability to determine the Operational state of a Hardware or Software component.
			S-DPS-20460	A	The PRONG CI shall take a pre-determined error recovery action if the resource which maintains the input data is not available for data staging.
			S-DPS-20470	A	The PRONG CI shall take a pre-determined error recovery action if the resource identified as the recipient of the Output Data is not available for data destaging.
			S-DPS-21220	A	The PRONG CI shall take a predetermined error recovery action if the maximum disk space requirements defined for that PGE has been exceeded by an adaptable percentage value.
			S-DPS-21230	A	The PRONG CI shall take a predetermined error recovery action if the maximum CPU time requirements defined for that PGE has been exceeded by an adaptable percentage value.
			S-DPS-21240	A	The PRONG CI shall take a predetermined error recovery action if the maximum memory usage requirements defined for that PGE has been exceeded by an adaptable percentage value.
PGS-0350#A	The PGS shall utilize tools provided by the LSM to support fault isolation between the PGS and external interfaces.		S-PLS-00490	A	The PLANG CI shall maintain Planning system fault data using fault isolation tools provided by the LSM.
			S-PLS-01400	A	The PLANG CI shall accept the fault isolation tools for the PLANG CI.
			S-PLS-01440	A	The PLANG CI shall collect Fault Management Data and provide it to the MSS.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0350#B	The PGS shall utilize tools provided by the LSM to support fault isolation between the PGS and external interfaces.		S-PLS-00490	A	The PLANG CI shall maintain Planning system fault data using fault isolation tools provided by the LSM.
			S-PLS-01400	A	The PLANG CI shall accept the fault isolation tools for the PLANG CI.
			S-PLS-01440	A	The PLANG CI shall collect Fault Management Data and provide it to the MSS.
PGS-0360#A	The PGS shall generate a PGS processing log that accounts for all data processing activities.	Data processing activities = PLANG and PRONG status logs.	C-CSS-28000	IR1	CSS Event Logger Service shall provide capability to record event and history data to a application specific log file.
			S-PLS-00470	A	The PLANG CI shall maintain information on the following: a. current processing status of all Production Requests received, b. current processing status of all Data Processing Requests generated, c. detected processing fault data.
			S-PLS-01250	A	The PLANG CI shall record detected hardware and software errors in a Planning processing log.
			S-PLS-01260	A	The PLANG CI shall support the capability to generate Planning processing log reports (periodically and on request) for a specified time period.
			S-DPS-21880	A	The PRONG CI shall provide a User Interface to authorized users.
			S-DPS-21950	A	The PRONG CI shall log all alert messages which are used to update the Processing Queue display information.
			C-CSS-28020	IR1	CSS Event Logger Service shall accept and record the application information (name and version of the calling application).
			C-CSS-28030	IR1	CSS Event Logger Service shall accept and record event message information.
			C-CSS-28040	IR1	CSS Event Logger Service shall accept and record the event type information. (Type of the event: fault, performance)
			C-CSS-28010	IR1	CSS Event Logger Service shall accept and record event time (when the event was generated, obtained from the Time Service) information.
PGS-0360#B	The PGS shall generate a PGS processing log that accounts for all data processing activities.	Data processing activities = PLANG and PRONG status logs.	C-CSS-28000	IR1	CSS Event Logger Service shall provide capability to record event and history data to a application specific log file.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-00470	A	The PLANG CI shall maintain information on the following: a. current processing status of all Production Requests received, b. current processing status of all Data Processing Requests generated, c. detected processing fault data.
			S-PLS-01250	A	The PLANG CI shall record detected hardware and software errors in a Planning processing log.
			S-PLS-01260	A	The PLANG CI shall support the capability to generate Planning processing log reports (periodically and on request) for a specified time period.
			S-DPS-21880	A	The PRONG CI shall provide a User Interface to authorized users.
			S-DPS-21950	A	The PRONG CI shall log all alert messages which are used to update the Processing Queue display information.
			C-CSS-28020	IR1	CSS Event Logger Service shall accept and record the application information (name and version of the calling application).
			C-CSS-28030	IR1	CSS Event Logger Service shall accept and record event message information.
			C-CSS-28040	IR1	CSS Event Logger Service shall accept and record the event type information. (Type of the event: fault, performance)
			C-CSS-28010	IR1	CSS Event Logger Service shall accept and record event time (when the event was generated, obtained from the Time Service) information.
PGS-0360#Ir1	The PGS shall generate a PGS processing log that accounts for all data processing activities.	IR1: This requirement is supported as follows: IR1 shall provide the capability to record science event and history data to a log file, by means of both the SDP Toolkit and the CSS event logger service.	C-CSS-28000	IR1	CSS Event Logger Service shall provide capability to record event and history data to a application specific log file.
			C-CSS-28020	IR1	CSS Event Logger Service shall accept and record the application information (name and version of the calling application).
			C-CSS-28030	IR1	CSS Event Logger Service shall accept and record event message information.
			C-CSS-28040	IR1	CSS Event Logger Service shall accept and record the event type information. (Type of the event: fault, performance)

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			C-CSS-28010	IR1	CSS Event Logger Service shall accept and record event time (when the event was generated, obtained from the Time Service) information.
PGS-0370#A	The PGS shall utilize the LSM to generate a PGS resource utilization report.		C-MSS-66050	IR1	The MSS performance management application service shall be capable of requesting performance data from each individual managed object: a. at configurable intervals b. on demand.
			S-PLS-00470	A	The PLANG CI shall maintain information on the following: a. current processing status of all Production Requests received, b. current processing status of all Data Processing Requests generated, c. detected processing fault data.
			S-PLS-01290	A	The PLANG CI shall support the generation of resource utilization reports (periodically and on request).
			S-DPS-20220	A	The operations staff shall have the capability to request a Data Processing Subsystem Resource Utilization Report from the MSS based on time span, resource classification, or operational role.
			S-DPS-21780	A	The operations staff shall have the capability of reporting resource management information.
			C-MSS-60600	IR1	The MSS Fault Management Application Service shall have the capability to generate, on an interactive and on a scheduled basis, reports on performance/error data that it has been configured to collect.
			C-MSS-66040	IR1	The MSS performance management application service shall be capable of specifying which available performance metrics are to be gathered from each individual managed object.
PGS-0370#B	The PGS shall utilize the LSM to generate a PGS resource utilization report.		C-MSS-66050	IR1	The MSS performance management application service shall be capable of requesting performance data from each individual managed object: a. at configurable intervals b. on demand.
			S-PLS-00470	A	The PLANG CI shall maintain information on the following: a. current processing status of all Production Requests received, b. current processing status of all Data Processing Requests generated, c. detected processing fault data.
			S-PLS-01290	A	The PLANG CI shall support the generation of resource utilization reports (periodically and on request).

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-20220	A	The operations staff shall have the capability to request a Data Processing Subsystem Resource Utilization Report from the MSS based on time span, resource classification, or operational role.
			S-DPS-21780	A	The operations staff shall have the capability of reporting resource management information.
			C-MSS-60600	IR1	The MSS Fault Management Application Service shall have the capability to generate, on an interactive and on a scheduled basis, reports on performance/error data that it has been configured to collect.
			C-MSS-66040	IR1	The MSS performance management application service shall be capable of specifying which available performance metrics are to be gathered from each individual managed object.
PGS-0370#Ir1	The PGS shall utilize the LSM to generate a PGS resource utilization report.	IR1: This requirement is supported as follows: IR1 shall provide resource monitoring and reporting capabilities using the management framework at the EDF. IR1 does not provide an LSM.	C-MSS-66050	IR1	The MSS performance management application service shall be capable of requesting performance data from each individual managed object: a. at configurable intervals b. on demand.
			C-MSS-60600	IR1	The MSS Fault Management Application Service shall have the capability to generate, on an interactive and on a scheduled basis, reports on performance/error data that it has been configured to collect.
			C-MSS-66040	IR1	The MSS performance management application service shall be capable of specifying which available performance metrics are to be gathered from each individual managed object.
PGS-0380#A	The PGS shall monitor its internal operations and generate a status report periodically and on request.	This requirement implies automatic periodic production of status reports.	S-PLS-00475	A	The PLANG CI shall maintain information on all Candidate and Active Plans generated.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-01200	A	The PLANG CI shall provide the operations staff with the capability to perform the following on-line functions, via GUI: a. Entry of product requests for standard products, b. Query / update / cancellation of production requests for standard products, c. Query status of production requests, d. Query / update of production rules and PGE information, e. Entry of plan creation requests, f. Entry of plan activation requests, g. Entry of plan cancellation requests, h. Query candidate / active plans and corresponding status, i. Entry of requests for processing log reports / production and data processing request status reports / resource utilization reports / planning workload status reports / management reports, j. Entry of ground events, k. Query / update of ground events.
			S-PLS-01270	A	The PLANG CI shall support the generation of Data Processing Request Status reports (upon request) that will provide Data Processing Request information based on the report generation parameters and the time period specified.
			S-PLS-01280	A	The PLANG CI shall support the generation of Production Request Status reports (upon request) that will provide Production Request information based on the report generation parameters and the time period specified.
			S-PLS-01300	A	The PLANG CI shall support the capability to generate PLANG CI processing workload and processing turnaround time reports (periodically and on request).
			S-PLS-01320	A	The PLANG CI shall make all reports generated available for review.
			S-DPS-20750	A	The PRONG CI shall send a Complete Notification Status message to the source of the Data Processing Request if the data staging process was not completed successfully for the Data Processing Request.
			S-DPS-20760	A	The Complete Notification Status message shall contain error information if the message was sent as a result of the failure of data staging.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-20870	A	The PRONG CI shall send a Complete Notification Status message to the source of the Data Processing Request if the data destaging process was not completed successfully for the Data Processing Request.
			S-DPS-20880	A	The Complete Notification Status message shall contain error information if the message was sent as a result of the failure of data destaging.
			S-DPS-21580	A	The PRONG CI shall send a Complete Notification Status message to the source of the Data Processing Request at the completion of PGE execution if the execution was terminated by the PRONG CI or the outputs of the PGE did not require destaging.
			S-DPS-21590	A	Upon the completion of destaging, the PRONG CI shall send a Complete Notification Status message to the source of the Data Processing Request.
			S-DPS-21770	A	The operations staff shall have the capability of requesting the status of a Data Processing Request.
			S-DPS-21880	A	The PRONG CI shall provide a User Interface to authorized users.
			S-DPS-22200	A	The PRONG CI shall accept a Processing Information Request to request the status of a Data Processing Request.
			S-DPS-22210	A	The PRONG CI shall have the capability to provide status for a Data Processing Request.
			S-DPS-22220	A	The PRONG CI shall provide current DPR Processing State data as part of the status information of a Data Processing Request.
			S-DPS-22230	A	The PRONG CI shall provide current queue position as part of the status information of a Data Processing Request.
			S-DPS-22240	A	The PRONG CI shall provide status information for the PGE associated with the Data Processing Request if the PGE is currently executing.
			S-DPS-22250	A	The PRONG CI shall have the capability of receiving the Status Information File of an executing PGE from the Data Processing Subsystem resource executing the PGE.
			S-DPS-22540	A	The PRONG CI shall send a Complete Notification Status message to the source of the Data Processing Request when the Data Processing Request is canceled.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-61045	A	The SPRHW CI shall provide local consoles for maintenance and operation.
PGS-0380#B	The PGS shall monitor its internal operations and generate a status report periodically and on request.	This requirement implies automatic periodic production of status reports.	S-PLS-00475	A	The PLANG CI shall maintain information on all Candidate and Active Plans generated.
			S-PLS-01200	A	The PLANG CI shall provide the operations staff with the capability to perform the following on-line functions, via GUI: a. Entry of product requests for standard products, b. Query / update / cancellation of production requests for standard products, c. Query status of production requests, d. Query / update of production rules and PGE information, e. Entry of plan creation requests, f. Entry of plan activation requests, g. Entry of plan cancellation requests, h. Query candidate / active plans and corresponding status, i. Entry of requests for processing log reports / production and data processing request status reports / resource utilization reports / planning workload status reports / management reports, j. Entry of ground events, k. Query / update of ground events.
			S-PLS-01270	A	The PLANG CI shall support the generation of Data Processing Request Status reports (upon request) that will provide Data Processing Request information based on the report generation parameters and the time period specified.
			S-PLS-01280	A	The PLANG CI shall support the generation of Production Request Status reports (upon request) that will provide Production Request information based on the report generation parameters and the time period specified.
			S-PLS-01300	A	The PLANG CI shall support the capability to generate PLANG CI processing workload and processing turnaround time reports (periodically and on request).
			S-PLS-01320	A	The PLANG CI shall make all reports generated available for review.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-20750	A	The PRONG CI shall send a Complete Notification Status message to the source of the Data Processing Request if the data staging process was not completed successfully for the Data Processing Request.
			S-DPS-20760	A	The Complete Notification Status message shall contain error information if the message was sent as a result of the failure of data staging.
			S-DPS-20870	A	The PRONG CI shall send a Complete Notification Status message to the source of the Data Processing Request if the data destaging process was not completed successfully for the Data Processing Request.
			S-DPS-20880	A	The Complete Notification Status message shall contain error information if the message was sent as a result of the failure of data destaging.
			S-DPS-21580	A	The PRONG CI shall send a Complete Notification Status message to the source of the Data Processing Request at the completion of PGE execution if the execution was terminated by the PRONG CI or the outputs of the PGE did not require destaging.
			S-DPS-21590	A	Upon the completion of destaging, the PRONG CI shall send a Complete Notification Status message to the source of the Data Processing Request.
			S-DPS-21770	A	The operations staff shall have the capability of requesting the status of a Data Processing Request.
			S-DPS-21880	A	The PRONG CI shall provide a User Interface to authorized users.
			S-DPS-22200	A	The PRONG CI shall accept a Processing Information Request to request the status of a Data Processing Request.
			S-DPS-22210	A	The PRONG CI shall have the capability to provide status for a Data Processing Request.
			S-DPS-22220	A	The PRONG CI shall provide current DPR Processing State data as part of the status information of a Data Processing Request.
			S-DPS-22230	A	The PRONG CI shall provide current queue position as part of the status information of a Data Processing Request.
			S-DPS-22240	A	The PRONG CI shall provide status information for the PGE associated with the Data Processing Request if the PGE is currently executing.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-22250	A	The PRONG CI shall have the capability of receiving the Status Information File of an executing PGE from the Data Processing Subsystem resource executing the PGE.
			S-DPS-22540	A	The PRONG CI shall send a Complete Notification Status message to the source of the Data Processing Request when the Data Processing Request is canceled.
			S-DPS-61045	A	The SPRHW CI shall provide local consoles for maintenance and operation.
			S-PLS-01210	B	The PLANG CI shall provide the operations staff with the capability to perform the following on-line functions, via GUI: a. Entry/query/update/ cancellation of Production Requests for Reprocessing, b. Query/update/cancellation of Production Requests for On-Demand Data Products.
PGS-0400#A	The PGS shall have the capability to monitor the status of all algorithm and calibration coefficient testing and generate algorithm and calibration test reports.		S-DPS-41000	IR1	The AITTL CI shall have the capability to measure the CPU time of a process.
			S-DPS-41005	IR1	The AITTL CI shall have the capability to measure the wall clock time of a process.
			S-DPS-41010	IR1	The AITTL CI shall have the capability to measure the CPU time of each procedure within a process.
			S-DPS-41015	IR1	The AITTL CI shall have the capability to measure the wall clock time of each procedure within a process.
			S-DPS-41020	IR1	The AITTL CI shall have the capability to measure the memory usage of a process.
			S-DPS-41030	IR1	The AITTL CI shall have the capability to measure the disk space usage of a process.
			S-DPS-41035	IR1	The AITTL CI shall have the capability to count the number of page faults for a process.
			S-DPS-41040	IR1	The AITTL CI shall have the capability to count the number of I/O accesses made by a process to each of its input and output data files.
			S-DPS-41500	IR1	The AITTL CI shall provide the capability for operations staff to write reports. This capability will include: (a) word processing, (b) spreadsheet, (c) plotting, (d) drawing.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-41510	IR1	The AITTL CI shall provide templates for reports to be written by the operations staff. (NOTE: It is assumed that these templates will be developed by the Science Office.)
			S-DPS-41520	IR1	The AITTL CI shall provide the capability for operations staff to keep a running log of integration and test activities on-line.
			S-DPS-41530	IR1	The AITTL CI shall provide the capability for authorized users to examine the integration and test logs and other reports.
PGS-0400#B	The PGS shall have the capability to monitor the status of all algorithm and calibration coefficient testing and generate algorithm and calibration test reports.		S-DPS-41000	IR1	The AITTL CI shall have the capability to measure the CPU time of a process.
			S-DPS-41005	IR1	The AITTL CI shall have the capability to measure the wall clock time of a process.
			S-DPS-41010	IR1	The AITTL CI shall have the capability to measure the CPU time of each procedure within a process.
			S-DPS-41015	IR1	The AITTL CI shall have the capability to measure the wall clock time of each procedure within a process.
			S-DPS-41020	IR1	The AITTL CI shall have the capability to measure the memory usage of a process.
			S-DPS-41030	IR1	The AITTL CI shall have the capability to measure the disk space usage of a process.
			S-DPS-41035	IR1	The AITTL CI shall have the capability to count the number of page faults for a process.
			S-DPS-41040	IR1	The AITTL CI shall have the capability to count the number of I/O accesses made by a process to each of its input and output data files.
			S-DPS-41500	IR1	The AITTL CI shall provide the capability for operations staff to write reports. This capability will include: (a) word processing, (b) spreadsheet, (c) plotting, (d) drawing.
			S-DPS-41510	IR1	The AITTL CI shall provide templates for reports to be written by the operations staff. (NOTE: It is assumed that these templates will be developed by the Science Office.)
			S-DPS-41520	IR1	The AITTL CI shall provide the capability for operations staff to keep a running log of integration and test activities on-line.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-41530	IR1	The AITTL CI shall provide the capability for authorized users to examine the integration and test logs and other reports.
PGS-0400#Ir1	The PGS shall have the capability to monitor the status of all algorithm and calibration coefficient testing and generate algorithm and calibration test reports.	IR1: Total applicability	S-DPS-41000	IR1	The AITTL CI shall have the capability to measure the CPU time of a process.
			S-DPS-41005	IR1	The AITTL CI shall have the capability to measure the wall clock time of a process.
			S-DPS-41010	IR1	The AITTL CI shall have the capability to measure the CPU time of each procedure within a process.
			S-DPS-41015	IR1	The AITTL CI shall have the capability to measure the wall clock time of each procedure within a process.
			S-DPS-41020	IR1	The AITTL CI shall have the capability to measure the memory usage of a process.
			S-DPS-41030	IR1	The AITTL CI shall have the capability to measure the disk space usage of a process.
			S-DPS-41040	IR1	The AITTL CI shall have the capability to count the number of I/O accesses made by a process to each of its input and output data files.
			S-DPS-41500	IR1	The AITTL CI shall provide the capability for operations staff to write reports. This capability will include: (a) word processing, (b) spreadsheet, (c) plotting, (d) drawing.
			S-DPS-41510	IR1	The AITTL CI shall provide templates for reports to be written by the operations staff. (NOTE: It is assumed that these templates will be developed by the Science Office.)
			S-DPS-41520	IR1	The AITTL CI shall provide the capability for operations staff to keep a running log of integration and test activities on-line.
			S-DPS-41530	IR1	The AITTL CI shall provide the capability for authorized users to examine the integration and test logs and other reports.
PGS-0410#A	The PGS shall have the capability to track the processing status of all products scheduled to be generated.		S-PLS-00470	A	The PLANG CI shall maintain information on the following: a. current processing status of all Production Requests received, b. current processing status of all Data Processing Requests generated, c. detected processing fault data.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-01000	A	The PLANG CI shall receive a Data Processing Request Response message, acknowledging acceptance of the Data Processing Request forwarded to the PRONG CI.
			S-PLS-01010	A	The PLANG CI shall receive "Complete Notification" status messages, indicating the completion status of Data Processing Requests.
			S-PLS-01020	A	The PLANG CI shall receive responses to Data Processing Request cancellations indicating the completion status of the cancellation requests.
			S-PLS-01030	A	The PLANG CI shall update the Active Plan with the current processing status of each Data Processing Request listed.
			S-PLS-01040	A	The PLANG CI shall send the current processing status of Production Requests (for On-Demand Data Products) to the originating Data Server.
			S-PLS-01245	A	The PLANG CI shall provide capability to make available (for review by all affected instrument teams) information related to product generation delays and production faults.
			S-DPS-21770	A	The operations staff shall have the capability of requesting the status of a Data Processing Request.
			S-DPS-21880	A	The PRONG CI shall provide a User Interface to authorized users.
			S-DPS-21900	A	The PRONG CI shall update the Processing Queue Display information when the Processing State of a queued Data Processing Request is modified.
			S-DPS-21910	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the queue processing of a Data Processing Request.
			S-DPS-21920	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the data staging process.
			S-DPS-21930	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the execution of a PGE.
			S-DPS-21940	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the data destaging process.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-22200	A	The PRONG CI shall accept a Processing Information Request to request the status of a Data Processing Request.
PGS-0410#B	The PGS shall have the capability to track the processing status of all products scheduled to be generated.		S-PLS-00470	A	The PLANG CI shall maintain information on the following: a. current processing status of all Production Requests received, b. current processing status of all Data Processing Requests generated, c. detected processing fault data.
			S-PLS-01000	A	The PLANG CI shall receive a Data Processing Request Response message, acknowledging acceptance of the Data Processing Request forwarded to the PRONG CI.
			S-PLS-01010	A	The PLANG CI shall receive "Complete Notification" status messages, indicating the completion status of Data Processing Requests.
			S-PLS-01020	A	The PLANG CI shall receive responses to Data Processing Request cancellations indicating the completion status of the cancellation requests.
			S-PLS-01030	A	The PLANG CI shall update the Active Plan with the current processing status of each Data Processing Request listed.
			S-PLS-01040	A	The PLANG CI shall send the current processing status of Production Requests (for On-Demand Data Products) to the originating Data Server.
			S-PLS-01245	A	The PLANG CI shall provide capability to make available (for review by all affected instrument teams) information related to product generation delays and production faults.
			S-DPS-21770	A	The operations staff shall have the capability of requesting the status of a Data Processing Request.
			S-DPS-21880	A	The PRONG CI shall provide a User Interface to authorized users.
			S-DPS-21900	A	The PRONG CI shall update the Processing Queue Display information when the Processing State of a queued Data Processing Request is modified.
			S-DPS-21910	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the queue processing of a Data Processing Request.
			S-DPS-21920	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the data staging process.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21930	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the execution of a PGE.
			S-DPS-21940	A	The PRONG CI shall update the Processing Queue Display information with an alert message when a fault has occurred during the data destaging process.
			S-DPS-22200	A	The PRONG CI shall accept a Processing Information Request to request the status of a Data Processing Request.
PGS-0420#A	The PGS shall provide tools to analyze system performance.		S-PLS-01480	A	The PLANG CI shall collect Performance Management Data and provide it to the MSS.
PGS-0420#B	The PGS shall provide tools to analyze system performance.		S-PLS-01480	A	The PLANG CI shall collect Performance Management Data and provide it to the MSS.
			C-MSS-92530	B	The MSS Report Generation Service shall be capable of generating a Planning Workload and Processing Turn-Around Report.
PGS-0430#A	The PGS shall utilize the LSM to monitor and account for data and information transfer between it and other EOSDIS elements.		S-DPS-20120	A	The PRONG CI shall inform the MSS using a MSS provided Fault Management API when a fault attributed to a MSS managed resource has occurred.
			S-DPS-20130	A	The PRONG CI shall provide Fault Management data to the MSS using a MSS provided Fault Management API.
			S-DPS-20210	A	The PRONG CI shall have the capability to determine the Operational state of a Hardware or Software component.
			C-MSS-66000	IR1	The MSS performance management application service shall be capable of monitoring the performance of the following ECS components a. network components 1. routers 2. links 3. bridges 4. gateways

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			C-MSS-66080	IR1	The MSS performance management application service shall be capable of retrieving the following data for all network component interfaces: a. operational status b. type c. speed d. octets in/out e. packets in/out f. discards in/out g. errors in/out
PGS-0430#B	The PGS shall utilize the LSM to monitor and account for data and information transfer between it and other EOSDIS elements.	B: AM-1, EDOS monitoring/accounting of data	S-DPS-20120	A	The PRONG CI shall inform the MSS using a MSS provided Fault Management API when a fault attributed to a MSS managed resource has occurred.
			S-DPS-20130	A	The PRONG CI shall provide Fault Management data to the MSS using a MSS provided Fault Management API.
			S-DPS-20210	A	The PRONG CI shall have the capability to determine the Operational state of a Hardware or Software component.
			C-MSS-66080	IR1	The MSS performance management application service shall be capable of retrieving the following data for all network component interfaces: a. operational status b. type c. speed d. octets in/out e. packets in/out f. discards in/out g. errors in/out
			C-MSS-66001	B	The MSS performance management application service shall be capable of monitoring the performance of the following ECS components a. network components 1. routers 2. links 3. bridges 4. gateways b. hosts c. operating systems d. peripherals e. data f. ECS applications.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0430#Ir1	The PGS shall utilize the LSM to monitor and account for data and information transfer between it and other EOSDIS elements.	IR1: This requirement is supported as follows: IR-1 shall provide network monitoring capabilities using the management framework at the EDF. IR1 does not provide an LSM.	C-MSS-66000	IR1	The MSS performance management application service shall be capable of monitoring the performance of the following ECS components a. network components 1. routers 2. links 3. bridges 4. gateways
			C-MSS-66080	IR1	The MSS performance management application service shall be capable of retrieving the following data for all network component interfaces: a. operational status b. type c. speed d. octets in/out e. packets in/out f. discards in/out g. errors in/out
PGS-0440#A	The PGS shall accept from the DADS L0-L4 data products. Received information shall contain at a minimum: a. Product identification b. L0-L4 data set c. Metadata required for processing d. Current date and time e. DADS identification	A: TRMM (CERES, LIS)	S-DPS-20770	A	The PRONG CI shall accept ECS Data Products from the SDSRV CI.
			S-DPS-20780	A	The PRONG CI shall accept metadata from the SDSRV CI.
			S-DPS-60612	A	The SPRHW CI platforms shall have provision for interfacing with Data Server.
PGS-0440#B	The PGS shall accept from the DADS L0-L4 data products. Received information shall contain at a minimum: a. Product identification b. L0-L4 data set c. Metadata required for processing d. Current date and time e. DADS identification	B: AM-1	S-DPS-20770	A	The PRONG CI shall accept ECS Data Products from the SDSRV CI.
			S-DPS-20780	A	The PRONG CI shall accept metadata from the SDSRV CI.
			S-DPS-60612	A	The SPRHW CI platforms shall have provision for interfacing with Data Server.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0450#A	The PGS shall accept from the DADS ancillary data sets. Received information shall contain at a minimum: a. Product identification b. Ancillary data set c. Metadata required for processing d. Current date and time e. DADS identification	A: CERES, LIS processing	S-DPS-20820	A	The PRONG CI shall accept Ancillary Data Products from the SDSRV CI.
			S-DPS-31700	A	The PRONG CI shall extract metadata attributes for external Ancillary Data sets, in addition to metadata extraction by the INGST CI.
PGS-0450#B	The PGS shall accept from the DADS ancillary data sets. Received information shall contain at a minimum: a. Product identification b. Ancillary data set c. Metadata required for processing d. Current date and time e. DADS identification	B: AM-1	S-DPS-20820	A	The PRONG CI shall accept Ancillary Data Products from the SDSRV CI.
			S-DPS-31700	A	The PRONG CI shall extract metadata attributes for external Ancillary Data sets, in addition to metadata extraction by the INGST CI.
PGS-0455#A	The PGS shall have the capability to assess the quality of spacecraft orbit and attitude (O/A) data contained in the ancillary data. QA shall be in the form of limits checking.		S-DPS-30610	A	The PRONG CI shall process the TRMM spacecraft ancillary data to assess the quality of onboard attitude data to detect and note in metadata the following conditions: a. missing data b. erroneous data (i.e. invalid Euler angle, invalid Euler angle rate)
PGS-0455#B	The PGS shall have the capability to assess the quality of spacecraft orbit and attitude (O/A) data contained in the ancillary data. QA shall be in the form of limits checking.		S-DPS-60615	A	The SPRHW CI platforms shall have provision for interfacing with Ingest

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-30300	B	The PRONG CI shall process the EOS-AM spacecraft ancillary data to assess the quality of onboard orbit data to detect and note in metadata the following conditions: a. missing data b. erroneous data (i.e. if distance from origin deviates greatly from a neighboring set of points or if magnitude of velocity deviates greatly from the neighboring set of velocities) excluding data that reflects orbit adjust maneuvers
			S-DPS-30600	B	The PRONG CI shall process the EOS-AM spacecraft ancillary data to assess the quality of onboard attitude data contained in the EOS-AM spacecraft ancillary data to detect and note in metadata the folloowing conditions: a) missing data b) erroneous data (i.e. invalid Euler angle, invalid Euler angle rate).
PGS-0456#B	The PGS shall notify the FDF, via the DADS, of O/A quality checks and request updated (refined/repaired) O/A data from the FDF when necessary.	B: APPLIES TO AM-1 ONLY	S-DPS-30320	B	The PRONG CI shall report on the quality of onboard orbit data, noting: a) the number of missing data are more than a specified limit value over a specified time interval b) the number of contiguous missing data are more than a specified value
PGS-0458#B	The PGS shall use configuration-controlled calibration coefficients and selected engineering data to generate calibrated ancillary data products necessary as input to the generation of Level 1 Standard Products in a timeframe that assures that production schedules for all products can be met.		S-PLS-00260	A	For each Production Request being processed, the PLANG CI shall interact with the appropriate instance of the SDSRV CI to determine whether the Granules needed to satisfy the request exist.
			S-PLS-00400	A	The PLANG CI shall maintain Product Generation Executives (PGEs) information that identifies the Science Software, the order of execution, the conditions for execution, the processing environment, and the input / output data types and locations.
			S-PLS-00460	A	The PLANG CI shall maintain lists of Granules needed to satisfy Production Requests.
			S-DPS-20600	A	The PRONG CI shall be able to determine what data required for PGE execution needs to be staged.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-20650	A	The PRONG CI shall be able to determine that a Calibration Coefficient Data File required for PGE execution requires staging.
			S-DPS-20800	A	The PRONG CI shall accept Calibration Coefficient data from the SDSRV CI.
			S-DPS-30300	B	The PRONG CI shall process the EOS-AM spacecraft ancillary data to assess the quality of onboard orbit data to detect and note in metadata the following conditions: a. missing data b. erroneous data (i.e. if distance from origin deviates greatly from a neighboring set of points or if magnitude of velocity deviates greatly from the neighboring set of velocities) excluding data that reflects orbit adjust maneuvers
PGS-0470#A	The PGS shall have the capability to produce each Standard Product as specified in that product's Standard Product specification.	A: CERES, LIS	S-PLS-00020	A	The PLANG CI shall generate Data Processing Requests from Production Requests.
			S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.
			S-DPS-20690	A	The PRONG CI shall initiate the data staging process when the disk space required to support successful data staging is available.
			S-DPS-20700	A	The PRONG CI shall request data staging by sending a Data Request to the SDSRV CI .

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21000	A	The PRONG CI shall initiate execution of a PGE when the following is true: a. When all input data required to execute the PGE is available on local Data Processing subsystem storage resources. b. When the computer hardware resources are available to support execution of a PGE based on the computer hardware resource information associated with the Data Processing Request. c. When the Priority Information associated with the Data Processing Request has been fulfilled. d. When the maximum disk space requirements defined for the PGE are available to support the successful execution of the PGE e. When the maximum memory resources defined for the PGE are available to support the successful execution of the PGE f. When the CPU resources defined for the PGE are available to support the successful execution of the PGE
			S-DPS-21070	A	The PRONG CI shall allocate disk space to support the execution of a PGE.
			S-DPS-21080	A	The PRONG CI shall allocate memory to support the execution of a PGE.
			S-DPS-21090	A	The PRONG CI shall allocate CPU to support the execution of a PGE.
PGS-0470#B	The PGS shall have the capability to produce each Standard Product as specified in that product's Standard Product specification.	B: AM-1, COLOR	S-PLS-00020	A	The PLANG CI shall generate Data Processing Requests from Production Requests.
			S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.
			S-DPS-20690	A	The PRONG CI shall initiate the data staging process when the disk space required to support successful data staging is available.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-20700	A	The PRONG CI shall request data staging by sending a Data Request to the SDSRV CI .
			S-DPS-21000	A	The PRONG CI shall initiate execution of a PGE when the following is true: a. When all input data required to execute the PGE is available on local Data Processing subsystem storage resources. b. When the computer hardware resources are available to support execution of a PGE based on the computer hardware resource information associated with the Data Processing Request. c. When the Priority Information associated with the Data Processing Request has been fulfilled. d. When the maximum disk space requirements defined for the PGE are available to support the successful execution of the PGE e. When the maximum memory resources defined for the PGE are available to support the successful execution of the PGE f. When the CPU resources defined for the PGE are available to support the successful execution of the PGE
			S-DPS-21070	A	The PRONG CI shall allocate disk space to support the execution of a PGE.
			S-DPS-21080	A	The PRONG CI shall allocate memory to support the execution of a PGE.
			S-DPS-21090	A	The PRONG CI shall allocate CPU to support the execution of a PGE.
PGS-0480#A	The PGS shall have the capability to perform all its processing based on priority.	A: CERES, LIS	S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.
			S-DPS-20490	A	The PRONG CI shall queue only validated Data Processing Requests
			S-DPS-20500	A	The Processing shall queue the Data Processing Request using the Priority Information associated with the Data Processing Request.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21000	A	The PRONG CI shall initiate execution of a PGE when the following is true: a. When all input data required to execute the PGE is available on local Data Processing subsystem storage resources. b. When the computer hardware resources are available to support execution of a PGE based on the computer hardware resource information associated with the Data Processing Request. c. When the Priority Information associated with the Data Processing Request has been fulfilled. d. When the maximum disk space requirements defined for the PGE are available to support the successful execution of the PGE e. When the maximum memory resources defined for the PGE are available to support the successful execution of the PGE f. When the CPU resources defined for the PGE are available to support the successful execution of the PGE
PGS-0480#B	The PGS shall have the capability to perform all its processing based on priority.	B: AM-1, COLOR	S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.
			S-DPS-20490	A	The PRONG CI shall queue only validated Data Processing Requests
			S-DPS-20500	A	The Processing shall queue the Data Processing Request using the Priority Information associated with the Data Processing Request.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21000	A	The PRONG CI shall initiate execution of a PGE when the following is true: a. When all input data required to execute the PGE is available on local Data Processing subsystem storage resources. b. When the computer hardware resources are available to support execution of a PGE based on the computer hardware resource information associated with the Data Processing Request. c. When the Priority Information associated with the Data Processing Request has been fulfilled. d. When the maximum disk space requirements defined for the PGE are available to support the successful execution of the PGE e. When the maximum memory resources defined for the PGE are available to support the successful execution of the PGE f. When the CPU resources defined for the PGE are available to support the successful execution of the PGE
PGS-0490#A	The PGS shall have the capability to access and use, for the generation of Standard Products, information such as: a. Digital terrain map databases b. Land/sea databases c. Climatology databases d. Digital political map databases		S-DPS-31620	A	The PRONG CI shall be able to stage the following GFE static data sets required for PGE execution for access by the SDP Toolkit: a. Digital terrain map data sets b. Land/Sea data sets c. Digital political map data sets
PGS-0490#B	The PGS shall have the capability to access and use, for the generation of Standard Products, information such as: a. Digital terrain map databases b. Land/sea databases c. Climatology databases d. Digital political map databases		S-DPS-31620	A	The PRONG CI shall be able to stage the following GFE static data sets required for PGE execution for access by the SDP Toolkit: a. Digital terrain map data sets b. Land/Sea data sets c. Digital political map data sets
PGS-0490#Ir1	The PGS shall have the capability to access and use, for the generation of Standard Products, information such as: a. Digital terrain map databases b. Land/sea databases c. Climatology databases d. Digital political map databases				

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0500#A	The PGS shall have the capability to generate Level 1 through 4 Standard Products using validated algorithms and calibration coefficients provided by the scientists.		S-PLS-00040	A	The PLANG CI shall reject a Production Request if an invalid product identifier has been specified.
			S-DPS-20440	A	The PRONG CI shall take a pre-determined error recovery action if the level of validation required for execution in the Data Processing Operational Environment has not been attained by the PGE version identified in the Data Processing Request .
			S-DPS-30700	A	The PRONG CI shall provide to the SDP Toolkit, at a minimum, the following metadata with the ephemeris data files for TRMM processing: a. Time range b. Orbit number range c. Platform
PGS-0500#B	The PGS shall have the capability to generate Level 1 through 4 Standard Products using validated algorithms and calibration coefficients provided by the scientists.		S-PLS-00040	A	The PLANG CI shall reject a Production Request if an invalid product identifier has been specified.
			S-DPS-20440	A	The PRONG CI shall take a pre-determined error recovery action if the level of validation required for execution in the Data Processing Operational Environment has not been attained by the PGE version identified in the Data Processing Request .
			S-DPS-30700	A	The PRONG CI shall provide to the SDP Toolkit, at a minimum, the following metadata with the ephemeris data files for TRMM processing: a. Time range b. Orbit number range c. Platform
			S-DPS-30710	B	The PRONG CI shall provide to the SDP Toolkit, at a minimum, the following metadata with the ephemeris data files for EOS-AM processing: a) time range b) orbit number range c) platform

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0510#A	The PGS shall have the capability to generate metadata (see Appendix C) according to the algorithms provided by the scientists and associate this metadata with each Standard Product generated.		S-DPS-21320	A	The PRONG CI shall use a SDP Toolkit API to associate Processing-Specific Metadata with each Granule of a generated Data Product.
			S-DPS-21330	A	The PRONG CI shall provide Processing-Specific Metadata to the SDP Toolkit to be associated with each Granule of a generated Data Product.
			S-DPS-21460	A	The PRONG CI shall use a SDP Toolkit API to associate Q/A-Specific Metadata with each Granule of a Data Product.
			S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.
PGS-0510#B	The PGS shall have the capability to generate metadata (see Appendix C) according to the algorithms provided by the scientists and associate this metadata with each Standard Product generated.		S-DPS-21320	A	The PRONG CI shall use a SDP Toolkit API to associate Processing-Specific Metadata with each Granule of a generated Data Product.
			S-DPS-21330	A	The PRONG CI shall provide Processing-Specific Metadata to the SDP Toolkit to be associated with each Granule of a generated Data Product.
			S-DPS-21460	A	The PRONG CI shall use a SDP Toolkit API to associate Q/A-Specific Metadata with each Granule of a Data Product.
			S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.
PGS-0512#A	The PGS shall generate unique granule IDs for all products generated at the PGS.	A: CERES, LIS	S-DPS-21530	A	The PRONG CI shall assign a unique Granule Identifier to each Granule of a generated Data Product.
PGS-0512#B	The PGS shall generate unique granule IDs for all products generated at the PGS.	B: AM-1, COLOR	S-DPS-21530	A	The PRONG CI shall assign a unique Granule Identifier to each Granule of a generated Data Product.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0520#A	The PGS shall have the capability to generate data products from any single datainput or combination of data inputs according to the algorithms provided by the scientists.	A: SDPF generated L0 data.	S-PLS-00260	A	For each Production Request being processed, the PLANG CI shall interact with the appropriate instance of the SDSRV CI to determine whether the Granules needed to satisfy the request exist.
			S-PLS-00460	A	The PLANG CI shall maintain lists of Granules needed to satisfy Production Requests.
			S-DPS-20700	A	The PRONG CI shall request data staging by sending a Data Request to the SDSRV CI .
			S-DPS-21000	A	The PRONG CI shall initiate execution of a PGE when the following is true: a. When all input data required to execute the PGE is available on local Data Processing subsystem storage resources. b. When the computer hardware resources are available to support execution of a PGE based on the computer hardware resource information associated with the Data Processing Request. c. When the Priority Information associated with the Data Processing Request has been fulfilled. d. When the maximum disk space requirements defined for the PGE are available to support the successful execution of the PGE e. When the maximum memory resources defined for the PGE are available to support the successful execution of the PGE f. When the CPU resources defined for the PGE are available to support the successful execution of the PGE
			S-DPS-31020	A	The PRONG CI shall provide, at a minimum, the following metadata information to the SDP Toolkit with SDPF-generated L0 data a. Actual start time of staged L0 data b. Actual end time of staged L0 data c. Number of physical L0 data files staged d. Start time of L0 data as requested by EOS investigators through the planning/processing system e. End time of L0 data as requested by EOS investigators through the planning/processing system f. APID of each L0 data file g. Orbit number or orbit number range of the staged L0 data file

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0520#B	The PGS shall have the capability to generate data products from any single data input or combination of data inputs according to the algorithms provided by the scientists.	B: EDOS generated L0 data.	S-PLS-00260	A	For each Production Request being processed, the PLANG CI shall interact with the appropriate instance of the SDSRV CI to determine whether the Granules needed to satisfy the request exist.
			S-PLS-00460	A	The PLANG CI shall maintain lists of Granules needed to satisfy Production Requests.
			S-DPS-20700	A	The PRONG CI shall request data staging by sending a Data Request to the SDSRV CI .
			S-DPS-21000	A	The PRONG CI shall initiate execution of a PGE when the following is true: a. When all input data required to execute the PGE is available on local Data Processing subsystem storage resources. b. When the computer hardware resources are available to support execution of a PGE based on the computer hardware resource information associated with the Data Processing Request. c. When the Priority Information associated with the Data Processing Request has been fulfilled. d. When the maximum disk space requirements defined for the PGE are available to support the successful execution of the PGE e. When the maximum memory resources defined for the PGE are available to support the successful execution of the PGE f. When the CPU resources defined for the PGE are available to support the successful execution of the PGE
			S-DPS-31020	A	The PRONG CI shall provide, at a minimum, the following metadata information to the SDP Toolkit with SDPF-generated L0 data a. Actual start time of staged L0 data b. Actual end time of staged L0 data c. Number of physical L0 data files staged d. Start time of L0 data as requested by EOS investigators through the planning/processing system e. End time of L0 data as requested by EOS investigators through the planning/processing system f. APID of each L0 data file g. Orbit number or orbit number range of the staged L0 data file

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-31030	B	The PRONG CI shall provide, at a minimum, the following metadata information to the SDP Toolkit with EDOS-generated L0 data: a. Actual start time of staged L0 data b. Actual end time of staged L0 data c. Number of physical L0 data files staged d. Start time of L0 data as requested by EOS investigators through the planning/processing system e. End time of L0 data as requested by EOS investigators through the planning/processing system f. APID of each L0 data file g. Orbit number or orbit number range of the staged L0 data file
			S-PLS-00465	B	The PLANG shall maintain lists of input Granules in order to support the production of tile or spatial-based output Granules
PGS-0540#B	The PGS shall reprocess specified science data using original or updated algorithms provided by the scientists.	All missions cumulative through Release B include CERES, LIS, AM-1, and COLOR.	S-PLS-00070	B	The PLANG CI shall accept Production Requests for reprocessing of Data Products from currently available input data.
PGS-0550#B	The PGS shall reprocess science data using the original or updated (provided by the scientists) calibration coefficients.	All missions cumulative through Release B include CERES, LIS, AM-1, and COLOR.	S-PLS-00070	B	The PLANG CI shall accept Production Requests for reprocessing of Data Products from currently available input data.
PGS-0560#A	The PGS shall maintain copies of generated products to be used as inputs to other scheduled products for processing efficiency.	A: CERES, LIS	S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21000	A	The PRONG CI shall initiate execution of a PGE when the following is true: a. When all input data required to execute the PGE is available on local Data Processing subsystem storage resources. b. When the computer hardware resources are available to support execution of a PGE based on the computer hardware resource information associated with the Data Processing Request. c. When the Priority Information associated with the Data Processing Request has been fulfilled. d. When the maximum disk space requirements defined for the PGE are available to support the successful execution of the PGE e. When the maximum memory resources defined for the PGE are available to support the successful execution of the PGE f. When the CPU resources defined for the PGE are available to support the successful execution of the PGE
			S-DPS-21520	A	The PRONG CI shall coordinate the deletion of the outputs of a PGE which were temporarily stored in the SDSRV CI.
			S-DPS-21540	A	The PRONG CI shall destage all output data generated by a PGE to the SDSRV CI. (SEE Data Staging and Destaging Reqs for more details).
PGS-0560#B	The PGS shall maintain copies of generated products to be used as inputs to other scheduled products for processing efficiency.	B: AM-1, COLOR	S-PLS-00710	A	The PLANG CI shall create a Candidate Plan based on the following: 1. Outstanding production requests, their priorities and estimated runtimes, 2. Ground events, their priority and estimated duration, 3. Planning production rules, 4. Mutual PGE accessibility of shared data, 5. Completion notification status messages from Data Processing.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21000	A	The PRONG CI shall initiate execution of a PGE when the following is true: a. When all input data required to execute the PGE is available on local Data Processing subsystem storage resources. b. When the computer hardware resources are available to support execution of a PGE based on the computer hardware resource information associated with the Data Processing Request. c. When the Priority Information associated with the Data Processing Request has been fulfilled. d. When the maximum disk space requirements defined for the PGE are available to support the successful execution of the PGE e. When the maximum memory resources defined for the PGE are available to support the successful execution of the PGE f. When the CPU resources defined for the PGE are available to support the successful execution of the PGE
			S-DPS-21520	A	The PRONG CI shall coordinate the deletion of the outputs of a PGE which were temporarily stored in the SDSRV CI.
			S-DPS-21540	A	The PRONG CI shall destage all output data generated by a PGE to the SDSRV CI. (SEE Data Staging and Destaging Reqs for more details).
PGS-0590#A	The PGS shall have the capability to indicate the temporary status of data stored in the DADS that is awaiting QA or human interaction in product production.	A: CERES, LIS	S-DPS-22120	A	The PRONG CI shall support a capability to alert the operations staff of a Data Product which is being stored temporarily in the Data Server.
			S-DPS-22130	A	The PRONG CI shall support a capability to alert the operations staff of a Data Product which requires quality assurance activities.
PGS-0590#B	The PGS shall have the capability to indicate the temporary status of data stored in the DADS that is awaiting QA or human interaction in product production.	B: AM-1, COLOR	S-DPS-22120	A	The PRONG CI shall support a capability to alert the operations staff of a Data Product which is being stored temporarily in the Data Server.
			S-DPS-22130	A	The PRONG CI shall support a capability to alert the operations staff of a Data Product which requires quality assurance activities.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0595#A	The PGS shall provide, to the ASTER science software, access to a relational database management system.	No operational capabilities; only acceptance and integration & test			
PGS-0595#B	The PGS shall provide, to the ASTER science software, access to a relational database management system.	Full relevance, i.e., operational			
PGS-0600#A	The PGS shall provide an algorithm and calibration test and validation environment that is fully compatible with but isolated from the operational production environment.	A: CERES, LIS	S-DPS-42330	A	The operations staff shall have the capability to run binary executables without impacting other ongoing DAAC activities.
PGS-0600#B	The PGS shall provide an algorithm and calibration test and validation environment that is fully compatible with but isolated from the operational production environment.	B: AM-1, COLOR	S-DPS-42100	IR1	The operations staff shall place a Science Software Delivery Package in a non-public directory accessible to the hardware scheduled to be used for I&T.
			S-DPS-42330	A	The operations staff shall have the capability to run binary executables without impacting other ongoing DAAC activities.
PGS-0602#A	The PGS shall have the capability to accept POSIX-compliant science algorithms and compile algorithm source code written in a standard programming language (e.g., Fortran, C, Ada).	A: CERES, LIS	S-PLS-61350	A	Each PLNHW CI POSIX.2 compliant platform shall have a screen capture utility.
			S-DPS-42170	IR1	The operations staff shall have the capability to compile all FORTRAN77, FORTRAN 90 and C source code included in the Delivery Package.
			S-DPS-42175	IR1	The operations staff shall have the capability to compile all Ada source code included in the Delivery Package for CERES.
			S-DPS-42300	IR1	The operations staff shall have the capability to link FORTRAN77, FORTRAN 90 and C object code with the SCF version of the SDP Toolkit.
			S-DPS-42305	IR1	The operations staff shall have the capability to link Ada object code for CERES with the SCF version of the SDP Toolkit.
			S-DPS-42320	IR1	The operations staff shall have the capability to link FORTRAN77, FORTRAN 90 and C object code with other libraries.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-42325	IR1	The operations staff shall have the capability to link Ada object code for CERES with other libraries.
			S-DPS-61173	IR1	Each development environment associated with the POSIX.2 compliant platform in the SPRHW CI shall have the capability to compile and link strictly conformant POSIX-compliant source code.
			S-DPS-61175	IR1	Each development environment associated with the POSIX.2 compliant platform in the SPRHW CI shall have an interactive source level debugger for ECS supported languages.
			S-DPS-70220	IR1	Each development environment associated with the POSIX.2 compliant platform in the AITHW CI shall have the capability to compile and link strictly conformant POSIX-compliant source code.
			S-DPS-70240	IR1	Each development environment associated with the POSIX.2 compliant platform in the AITHW CI shall have an interactive source level debugger for ECS supported languages.
			S-DPS-70250	IR1	Each development environment associated with the POSIX.2 compliant platform in the AITHW CI shall have a screen capture utility.
			S-DPS-70260	IR1	The AITHW CI shall include a set of profiling tools, with the capability to measure the average and maximum of the following: a. CPU time b. memory usage c. disk space usage of a process
			S-DPS-70270	IR1	The AITHW CI profiling tools shall be accessible via an API (application program interface).
			S-DPS-70280	IR1	The AITHW CI profiling tools shall be accessible via a GUI (graphical user interface).
			S-DPS-80110	A	The operating system for each UNIX platform in the AQAHW CI shall conform to the POSIX.2 standard.
			S-DPS-80120	A	The AQAHW CI POSIX.2 compliant platform shall have the following utilities installed at a minimum: perl, emacs, gzip, tar, imake, prof, gprof, nm.
			S-DPS-80130	A	The AQAHW CI POSIX.2 compliant platform ishall have the following POSIX.2 User Portability Utilities installed at a minmum: man, vi.
			S-DPS-80140	A	The AQAHW CI POSIX.2 compliant platform shall have the following POSIX.2 Software Development Utilities installed at a minimum: make.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-80150	A	The AQAHW CI POSIX.2 compliant platform shall have the following Unix shells installed at a minimum: C shell, Bourne shell, Korn shell.
			S-DPS-61172	IR1	The SPRHW CI POSIX.2 compliant platform shall have installed one or more development environment supporting the following languages: a. C b. C++ c. FORTRAN 77 d. FORTRAN 90
			S-DPS-61177	IR1	The SPRHW CI POSIX.2 compliant platform supporting AI&T of CERES S/W shall have installed an ADA development environment.
			S-DPS-61174	IR1	Each development environment associated with the POSIX.2 compliant platform in the SPRHW CI shall have the capability to compile and link source code containing extensions specified in the Data Production S/W and SCF Standards and Guidelines.
			S-DPS-70230	IR1	Each development environment associated with the POSIX.2 compliant platform in the AITHW CI shall have the capability to compile and link source code containing extensions specified in the Data Production S/W and SCF Standards and Guidelines.
PGS-0602#B	The PGS shall have the capability to accept POSIX-compliant science algorithms and compile algorithm source code written in a standard programming language (e.g., Fortran, C, Ada).	B: AM-1, COLOR	S-PLS-61350	A	Each PLNHW CI POSIX.2 compliant platform shall have a screen capture utility.
			S-DPS-42170	IR1	The operations staff shall have the capability to compile all FORTRAN77, FORTRAN 90 and C source code included in the Delivery Package.
			S-DPS-42175	IR1	The operations staff shall have the capability to compile all Ada source code included in the Delivery Package for CERES.
			S-DPS-42300	IR1	The operations staff shall have the capability to link FORTRAN77, FORTRAN 90 and C object code with the SCF version of the SDP Toolkit.
			S-DPS-42305	IR1	The operations staff shall have the capability to link Ada object code for CERES with the SCF version of the SDP Toolkit.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-42320	IR1	The operations staff shall have the capability to link FORTRAN77, FORTRAN 90 and C object code with other libraries.
			S-DPS-42325	IR1	The operations staff shall have the capability to link Ada object code for CERES with other libraries.
			S-DPS-61173	IR1	Each development environment associated with the POSIX.2 compliant platform in the SPRHW CI shall have the capability to compile and link strictly conformant POSIX-compliant source code.
			S-DPS-61175	IR1	Each development environment associated with the POSIX.2 compliant platform in the SPRHW CI shall have an interactive source level debugger for ECS supported languages.
			S-DPS-70220	IR1	Each development environment associated with the POSIX.2 compliant platform in the AITHW CI shall have the capability to compile and link strictly conformant POSIX-compliant source code.
			S-DPS-70240	IR1	Each development environment associated with the POSIX.2 compliant platform in the AITHW CI shall have an interactive source level debugger for ECS supported languages.
			S-DPS-70250	IR1	Each development environment associated with the POSIX.2 compliant platform in the AITHW CI shall have a screen capture utility.
			S-DPS-70260	IR1	The AITHW CI shall include a set of profiling tools, with the capability to measure the average and maximum of the following: a. CPU time b. memory usage c. disk space usage of a process
			S-DPS-70270	IR1	The AITHW CI profiling tools shall be accessible via an API (application program interface).
			S-DPS-70280	IR1	The AITHW CI profiling tools shall be accessible via a GUI (graphical user interface).
			S-DPS-80110	A	The operating system for each UNIX platform in the AQAHW CI shall conform to the POSIX.2 standard.
			S-DPS-80120	A	The AQAHW CI POSIX.2 compliant platform shall have the following utilities installed at a minimum: perl, emacs, gzip, tar, imake, prof, gprof, nm.
			S-DPS-80130	A	The AQAHW CI POSIX.2 compliant platform ishall have the following POSIX.2 User Portability Utilities installed at a minmum: man, vi.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-80140	A	The AQAHW CI POSIX.2 compliant platform shall have the following POSIX.2 Software Development Utilities installed at a minimum: make.
			S-DPS-80150	A	The AQAHW CI POSIX.2 compliant platform shall have the following Unix shells installed at a minimum: C shell, Bourne shell, Korn shell.
			S-DPS-61172	IR1	The SPRHW CI POSIX.2 compliant platform shall have installed one or more development environment supporting the following languages: a. C b. C++ c. FORTRAN 77 d. FORTRAN 90
			S-DPS-61177	IR1	The SPRHW CI POSIX.2 compliant platform supporting AI&T of CERES S/W shall have installed an ADA development environment.
			S-DPS-61174	IR1	Each development environment associated with the POSIX.2 compliant platform in the SPRHW CI shall have the capability to compile and link source code containing extensions specified in the Data Production S/W and SCF Standards and Guidelines.
			S-DPS-70230	IR1	Each development environment associated with the POSIX.2 compliant platform in the AITHW CI shall have the capability to compile and link source code containing extensions specified in the Data Production S/W and SCF Standards and Guidelines.
PGS-0602#Ir1	The PGS shall have the capability to accept POSIX-compliant science algorithms and compile algorithm source code written in a standard programming language (e.g., Fortran, C, Ada).	IR1: External Interface Requirement SCF-0010.	S-DPS-42170	IR1	The operations staff shall have the capability to compile all FORTRAN77, FORTRAN 90 and C source code included in the Delivery Package.
			S-DPS-42175	IR1	The operations staff shall have the capability to compile all Ada source code included in the Delivery Package for CERES.
			S-DPS-42300	IR1	The operations staff shall have the capability to link FORTRAN77, FORTRAN 90 and C object code with the SCF version of the SDP Toolkit.
			S-DPS-42305	IR1	The operations staff shall have the capability to link Ada object code for CERES with the SCF version of the SDP Toolkit.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-42320	IR1	The operations staff shall have the capability to link FORTRAN77, FORTRAN 90 and C object code with other libraries.
			S-DPS-42325	IR1	The operations staff shall have the capability to link Ada object code for CERES with other libraries.
			S-DPS-61173	IR1	Each development environment associated with the POSIX.2 compliant platform in the SPRHW CI shall have the capability to compile and link strictly conformant POSIX-compliant source code.
			S-DPS-61175	IR1	Each development environment associated with the POSIX.2 compliant platform in the SPRHW CI shall have an interactive source level debugger for ECS supported languages.
			S-DPS-70220	IR1	Each development environment associated with the POSIX.2 compliant platform in the AITHW CI shall have the capability to compile and link strictly conformant POSIX-compliant source code.
			S-DPS-70240	IR1	Each development environment associated with the POSIX.2 compliant platform in the AITHW CI shall have an interactive source level debugger for ECS supported languages.
			S-DPS-70250	IR1	Each development environment associated with the POSIX.2 compliant platform in the AITHW CI shall have a screen capture utility.
			S-DPS-70260	IR1	The AITHW CI shall include a set of profiling tools, with the capability to measure the average and maximum of the following: a. CPU time b. memory usage c. disk space usage of a process
			S-DPS-70270	IR1	The AITHW CI profiling tools shall be accessible via an API (application program interface).
			S-DPS-70280	IR1	The AITHW CI profiling tools shall be accessible via a GUI (graphical user interface).
			S-DPS-61172	IR1	The SPRHW CI POSIX.2 compliant platform shall have installed one or more development environment supporting the following languages: a. C b. C++ c. FORTRAN 77 d. FORTRAN 90

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-61177	IR1	The SPRHW CI POSIX.2 compliant platform supporting AI&T of CERES S/W shall have installed an ADA development environment.
			S-DPS-61174	IR1	Each development environment associated with the POSIX.2 compliant platform in the SPRHW CI shall have the capability to compile and link source code containing extensions specified in the Data Production S/W and SCF Standards and Guidelines.
			S-DPS-70230	IR1	Each development environment associated with the POSIX.2 compliant platform in the AITHW CI shall have the capability to compile and link source code containing extensions specified in the Data Production S/W and SCF Standards and Guidelines.
PGS-0605#A	The PGS shall process pre-launch test data and provide test data product samples for user verification.	A: CERES, LIS	S-DPS-42630	A	The operations staff shall have the capability of run PGEs in a parallel test or for a commissioning period, utilizing the Planning and Processing Subsystems and the Product output flagged as "test".
PGS-0605#B	The PGS shall process pre-launch test data and provide test data product samples for user verification.	B: AM-1, COLOR	S-DPS-42630	A	The operations staff shall have the capability of run PGEs in a parallel test or for a commissioning period, utilizing the Planning and Processing Subsystems and the Product output flagged as "test".
PGS-0610#A	The PGS shall accept from the SCFs new or modified calibration coefficients to be validated in the test environment. Calibration coefficients shall contain the following information at a minimum: a. Identification of coefficient data set b. Calibration coefficients values c. Author and version number d. Identification of related processing algorithm e. Start and stop date/time of applicability f. Date and time g. SCF identification h. Reasons for update		S-DPS-40010	IR1	The AITTL CI shall have the capability to receive a Science Software Delivery from the SCF electronically via the network.
			S-DPS-40020	A	The AITTL CI shall have the capability to receive a Science Software Delivery from the Science Data Server.
			S-DPS-40030	A	The AITTL CI shall provide the operations staff with the capability to register a Subscription with the Data Server to be notified when a new Science Software Delivery is received.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-40040	A	The AITTL CI shall provide the operations staff with the capability to request transfer of the Science Software Delivery files from the Data Server to the local I&T area.
			S-DPS-42200	IR1	Whenever a Science Software Delivery is received by the AITTL CI directly from the SCF via the network, the operations staff shall notify the SCF that the delivery has been received successfully.
PGS-0610#B	The PGS shall accept from the SCFs new or modified calibration coefficients to be validated in the test environment. Calibration coefficients shall contain the following information at a minimum: a. Identification of coefficient data set b. Calibration coefficients values c. Author and version number d. Identification of related processing algorithm e. Start and stop date/time of applicability f. Date and time g. SCF identification h. Reasons for update		S-DPS-40010	IR1	The AITTL CI shall have the capability to receive a Science Software Delivery from the SCF electronically via the network.
			S-DPS-40020	A	The AITTL CI shall have the capability to receive a Science Software Delivery from the Science Data Server.
			S-DPS-40030	A	The AITTL CI shall provide the operations staff with the capability to register a Subscription with the Data Server to be notified when a new Science Software Delivery is received.
			S-DPS-40040	A	The AITTL CI shall provide the operations staff with the capability to request transfer of the Science Software Delivery files from the Data Server to the local I&T area.
			S-DPS-42200	IR1	Whenever a Science Software Delivery is received by the AITTL CI directly from the SCF via the network, the operations staff shall notify the SCF that the delivery has been received successfully.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0610#Ir1	The PGS shall accept from the SCFs new or modified calibration coefficients to be validated in the test environment. Calibration coefficients shall contain the following information at a minimum: a. Identification of coefficient data set b. Calibration coefficients values c. Author and version number d. Identification of related processing algorithm e. Start and stop date/time of applicability f. Date and time g. SCF identification h. Reasons for update	This requirement is supported as follows: Ir1 shall have the capability to accept calibration coefficients from the SCFs but will not use them in the test environment.	S-DPS-40010	IR1	The AITTL CI shall have the capability to receive a Science Software Delivery from the SCF electronically via the network.
			S-DPS-42200	IR1	Whenever a Science Software Delivery is received by the AITTL CI directly from the SCF via the network, the operations staff shall notify the SCF that the delivery has been received successfully.
PGS-0620#A	The PGS shall have the capability to validate received calibration coefficients for completeness and correct format.		S-DPS-40700	A	The data visualization capability of the AITTL CI shall include the capability to display data in hexadecimal, octal, decimal, or ASCII form.
			S-DPS-40710	A	The data visualization capability of the AITTL CI shall include the capability to display data as a two- or three-dimensional image.
			S-DPS-40720	A	The data visualization capability of the AITTL CI shall include the capability to display data as a two- or three-dimensional plot.
			S-DPS-40730	A	The data visualization capability of the AITTL CI shall include the capability to difference data and to display the differences as a two- or three-dimensional image or plot.
			S-DPS-40740	A	The data visualization capability of the AITTL CI shall include the capability to produce and play a "movie loop" of data in two- or three-dimensional image or plot form.
			S-DPS-40750	A	The data visualization capability of the AITTL CI shall include the capability to display an arbitrary two-dimensional slice of a three-dimensional image or plot.
			S-DPS-40760	A	The data visualization capability of the AITTL CI shall include the capability to rotate a three-dimensional image or plot about an arbitrary axis.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-40770	A	The data visualization capability of the AITTL CI shall include providing the user with the option to specify the color table for new or existing image displays.
			S-DPS-40780	A	The data visualization capability of the AITTL CI shall include providing the user with the option to specify the axis limits for new or existing plot displays.
			S-DPS-40790	A	The data visualization capability of the AITTL CI shall include providing the operations staff with the option to specify the parameter assigned to each axis in new or existing plot or image displays.
			S-DPS-40800	A	The data visualization capability of the AITTL CI shall include the capability to display simultaneously multiple views of the same or different data in different windows.
			S-DPS-40810	A	The data visualization capability of the AITTL CI shall include the capability to save any plot, image, or hex/decimal/octal/ASCII dump to a file.
			S-DPS-40820	A	The data visualization capability of the AITTL CI shall include feature enhancement capabilities, including but not limited to (1) histogram equalization and (2) edge enhancement.
			S-DPS-40830	A	The data visualization capability of the AITTL CI shall include the capability to read ASCII, binary, or HDF files.
			S-DPS-40840	A	The data visualization capability of the AITTL CI shall include the capability to allow the operations staff to specify a custom input data format.
			S-DPS-40900	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified absolute threshold.
			S-DPS-40910	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified relative threshold.
			S-DPS-40920	IR1	The AITTL CI shall have the capability to generate report files describing the results of file comparisons.
			S-DPS-40930	IR1	The file comparison capability of the AITTL CI shall include the capability to read ASCII, binary, or HDF files.
			S-DPS-40940	IR1	The file comparison capability of the AITTL CI shall include the capability to allow the operations staff to specify a custom data format.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-42150	IR1	The operations staff shall have the capability to examine all test data and expected test results files included in the Delivery Package to verify completeness and correct format.
			S-DPS-42160	IR1	The operations staff shall have the capability to examine all coefficient files included in the Delivery Package to verify completeness and correct format.
PGS-0620#B	The PGS shall have the capability to validate received calibration coefficients for completeness and correct format.		S-DPS-40700	A	The data visualization capability of the AITTL CI shall include the capability to display data in hexadecimal, octal, decimal, or ASCII form.
			S-DPS-40710	A	The data visualization capability of the AITTL CI shall include the capability to display data as a two- or three-dimensional image.
			S-DPS-40720	A	The data visualization capability of the AITTL CI shall include the capability to display data as a two- or three-dimensional plot.
			S-DPS-40730	A	The data visualization capability of the AITTL CI shall include the capability to difference data and to display the differences as a two- or three-dimensional image or plot.
			S-DPS-40740	A	The data visualization capability of the AITTL CI shall include the capability to produce and play a "movie loop" of data in two- or three-dimensional image or plot form.
			S-DPS-40750	A	The data visualization capability of the AITTL CI shall include the capability to display an arbitrary two-dimensional slice of a three-dimensional image or plot.
			S-DPS-40760	A	The data visualization capability of the AITTL CI shall include the capability to rotate a three-dimensional image or plot about an arbitrary axis.
			S-DPS-40770	A	The data visualization capability of the AITTL CI shall include providing the user with the option to specify the color table for new or existing image displays.
			S-DPS-40780	A	The data visualization capability of the AITTL CI shall include providing the user with the option to specify the axis limits for new or existing plot displays.
			S-DPS-40790	A	The data visualization capability of the AITTL CI shall include providing the operations staff with the option to specify the parameter assigned to each axis in new or existing plot or image displays.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-40800	A	The data visualization capability of the AITTL CI shall include the capability to display simultaneously multiple views of the same or different data in different windows.
			S-DPS-40810	A	The data visualization capability of the AITTL CI shall include the capability to save any plot, image, or hex/decimal/octal/ASCII dump to a file.
			S-DPS-40820	A	The data visualization capability of the AITTL CI shall include feature enhancement capabilities, including but not limited to (1) histogram equalization and (2) edge enhancement.
			S-DPS-40830	A	The data visualization capability of the AITTL CI shall include the capability to read ASCII, binary, or HDF files.
			S-DPS-40840	A	The data visualization capability of the AITTL CI shall include the capability to allow the operations staff to specify a custom input data format.
			S-DPS-40900	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified absolute threshold.
			S-DPS-40910	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified relative threshold.
			S-DPS-40920	IR1	The AITTL CI shall have the capability to generate report files describing the results of file comparisons.
			S-DPS-40930	IR1	The file comparison capability of the AITTL CI shall include the capability to read ASCII, binary, or HDF files.
			S-DPS-40940	IR1	The file comparison capability of the AITTL CI shall include the capability to allow the operations staff to specify a custom data format.
			S-DPS-42150	IR1	The operations staff shall have the capability to examine all test data and expected test results files included in the Delivery Package to verify completeness and correct format.
			S-DPS-42160	IR1	The operations staff shall have the capability to examine all coefficient files included in the Delivery Package to verify completeness and correct format.
PGS-0620#Ir1	The PGS shall have the capability to validate received calibration coefficients for completeness and correct format.	IR1: TRMM and SCF	S-DPS-40900	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified absolute threshold.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-40910	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified relative threshold.
			S-DPS-40920	IR1	The AITTL CI shall have the capability to generate report files describing the results of file comparisons.
			S-DPS-40930	IR1	The file comparison capability of the AITTL CI shall include the capability to read ASCII, binary, or HDF files.
			S-DPS-40940	IR1	The file comparison capability of the AITTL CI shall include the capability to allow the operations staff to specify a custom data format.
			S-DPS-42150	IR1	The operations staff shall have the capability to examine all test data and expected test results files included in the Delivery Package to verify completeness and correct format.
			S-DPS-42160	IR1	The operations staff shall have the capability to examine all coefficient files included in the Delivery Package to verify completeness and correct format.
PGS-0630#A	The PGS shall send the DADS new or modified calibration coefficients which shall contain the following information at a minimum: a. Identification of coefficient data set b. Calibration coefficients values c. Author and version number d. Identification of related processing algorithm e. Start and stop date/time of applicability f. Documentation		S-DPS-60612	A	The SPRHW CI platforms shall have provision for interfacing with Data Server.
PGS-0630#B	The PGS shall send the DADS new or modified calibration coefficients which shall contain the following information at a minimum: a. Identification of coefficient data set b. Calibration coefficients values c. Author and version number d. Identification of related processing algorithm e. Start and stop date/time of applicability f. Documentation		S-DPS-60612	A	The SPRHW CI platforms shall have provision for interfacing with Data Server.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-41100	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to display a list of Science Software Archive Packages in the Data Server.
			S-DPS-41110	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to display the metadata for a specific Science Software Archive Package.
			S-DPS-41120	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to display a list of the files that comprise a specific Science Software Archive Package.
			S-DPS-41130	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to retrieve a copy of a specified file belonging to a specific Science Software Archive Package.
			S-DPS-41140	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to add a new Science Software Archive Package to the Data Server.
			S-DPS-41150	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to add or remove a file to or from the set of files comprising a specific Science Software Archive Package.
			S-DPS-41160	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to edit the metadata for a specific Science Software Archive Package.
			S-DPS-41170	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to remove a specific Science Software Archive Package from the Data Server.
			S-DPS-41180	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to define new data types for new Products produced by an Science Software Archive Package.
			S-DPS-41190	B	The AITTL CI SSAP GUI for adding an Science Software Archive Package to the Data Server shall have the capability of accepting its inputs from a file.
			S-DPS-41200	B	The AITTL CI SSAP GUI for adding an Science Software Archive Package to the Data Server shall provide the operations staff with the ability (a) to restrict update access to the Data Server to authorized personnel and (b) to maintain a record of updates made.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0640#A	The PGS shall accept from the SCF new or modified Standard Product algorithms to be tested at the processing facility. This software shall be received into the test environment and shall contain the following information at a minimum : a. Algorithm identification b. Algorithm source code c. List of required inputs d. Processing dependencies e. Test data and procedures f. Algorithm documentation	A: Adding the interface with the Dataserver, ESN and LaRC DAAC interface.	S-INS-00670	A	The INGST CI shall ingest Data, provided by an SCF, from the ESN into the MSFC DAAC using a file transfer protocol.
			S-INS-00680	A	The INGST CI shall ingest Data, provided by an SCF, from the ESN into the LaRC DAAC using a file transfer protocol.
			S-DPS-40010	IR1	The AITTL CI shall have the capability to receive a Science Software Delivery from the SCF electronically via the network.
			S-DPS-40020	A	The AITTL CI shall have the capability to receive a Science Software Delivery from the Science Data Server.
			S-DPS-40030	A	The AITTL CI shall provide the operations staff with the capability to register a Subscription with the Data Server to be notified when a new Science Software Delivery is received.
			S-DPS-40040	A	The AITTL CI shall provide the operations staff with the capability to request transfer of the Science Software Delivery files from the Data Server to the local I&T area.
			S-DPS-42200	IR1	Whenever a Science Software Delivery is received by the AITTL CI directly from the SCF via the network, the operations staff shall notify the SCF that the delivery has been received successfully.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0640#B	The PGS shall accept from the SCF new or modified Standard Product algorithms to be tested at the processing facility. This software shall be received into the test environment and shall contain the following information at a minimum: a. Algorithm identification b. Algorithm source code c. List of required inputs d. Processing dependencies e. Test data and procedures f. Algorithm documentation	B: Adding MSS interface and the capability to execute chains.	S-INS-00670	A	The INGST CI shall ingest Data, provided by an SCF, from the ESN into the MSFC DAAC using a file transfer protocol.
			S-INS-00680	A	The INGST CI shall ingest Data, provided by an SCF, from the ESN into the LaRC DAAC using a file transfer protocol.
			S-DPS-40010	IR1	The AITTL CI shall have the capability to receive a Science Software Delivery from the SCF electronically via the network.
			S-DPS-40020	A	The AITTL CI shall have the capability to receive a Science Software Delivery from the Science Data Server.
			S-DPS-40030	A	The AITTL CI shall provide the operations staff with the capability to register a Subscription with the Data Server to be notified when a new Science Software Delivery is received.
			S-DPS-40040	A	The AITTL CI shall provide the operations staff with the capability to request transfer of the Science Software Delivery files from the Data Server to the local I&T area.
			S-DPS-42200	IR1	Whenever a Science Software Delivery is received by the AITTL CI directly from the SCF via the network, the operations staff shall notify the SCF that the delivery has been received successfully.
			S-INS-00682	B	The INGST CI shall ingest Data, provided by an SCF, from the LAN into the GSFC DAAC using a file transfer protocol.
			S-INS-00684	B	The INGST CI shall ingest Data, provided by an SCF, from the LAN into the JPL DAAC using a file transfer protocol.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0640#Ir1	The PGS shall accept from the SCF new or modified Standard Product algorithms to be tested at the processing facility. This software shall be received into the test environment and shall contain the following information at a minimum : a. Algorithm identification b. Algorithm source code c. List of required inputs d. Processing dependencies e. Test data and procedures f. Algorithm documentation	IR1: Total applicability.	S-DPS-40010	IR1	The AITTL CI shall have the capability to receive a Science Software Delivery from the SCF electronically via the network.
			S-DPS-42200	IR1	Whenever a Science Software Delivery is received by the AITTL CI directly from the SCF via the network, the operations staff shall notify the SCF that the delivery has been received successfully.
PGS-0650#A	The PGS shall have the capability to validate required operational algorithm characteristics shall be include at a minimum: a. Language b. Operational impacts (e.g., algorithm software size, required resources) c. Algorithm documentation d. Data handling standards as appropriate e. Units and models used f. Operational compatibility g. Required metadata outputs		S-DPS-40100	IR1	The AITTL CI shall provide the operations staff with the capability to display Science Software documentation stored in any of the following formats: a) PostScript, b) ASCII, c) Hypertext Markup Language (HTML), d) Microsoft Word, e) WordPerfect, f) Adobe Acrobat Portable Document Format (PDF).
			S-DPS-40110	IR1	The AITTL CI shall provide the operations staff with the capability to print Science Software documentation stored in any of the following formats: a) PostScript, b) ASCII, c) Hypertext Markup Language (HTML), d) Microsoft Word, e) WordPerfect, f) Adobe Acrobat Portable Document Format (PDF).
			S-DPS-40200	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in C complies with the ANSI standard specification for C.
			S-DPS-40210	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in FORTRAN77 complies with the ANSI standard specification for FORTRAN77.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-40230	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in FORTRAN 90 complies with the ANSI standard specification for FORTRAN 90.
			S-DPS-40250	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in Ada complies with the military specification MIL-STD-1815-A.
			S-DPS-40260	IR1	The AITTL CI shall have the capability to verify that Science Software source code is POSIX-compliant.
			S-DPS-40280	IR1	The AITTL CI shall have the capability to verify that Science Software source code and Science Software scripts follow the following SDP Toolkit usage requirements (from 194-809-SD4-001, PGS Toolkit Users Guide for the ECS Project): a. Source code does not make any prohibited POSIX function calls b. The Status Message Text Files have the correct format
			S-DPS-40320	IR1	The AITTL CI shall have the capability to verify that Science Software source code includes headers as specified in 423-16-01, Data Production Software and Science Computing Facility (SCF) Standards and Guidelines.
			S-DPS-40340	IR1	The AITTL CI shall have the capability to generate report files describing the results of standards checking.
			S-DPS-41050	IR1	The AITTL CI shall have the capability to generate report files discussing the results of profiling activities.
			S-DPS-42000	IR1	The AITTL CI shall provide the operations staff with the capability to view the metadata associated with a data file.
			S-DPS-42005	IR1	The AITTL CI shall provide the operations staff with the capability to edit the metadata associated with a data file.
			S-DPS-42010	IR1	The AITTL CI shall provide the operations staff with the capability to write the metadata associated with a data file to a report file.
			S-DPS-42110	IR1	The operations staff shall read and/or review all documentation included in the Delivery Package.
			S-DPS-42120	IR1	The operations staff shall perform automated checking of all source code included in the Delivery Package against established coding standards and guidelines.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-42130	IR1	The operations staff shall perform automated checking of all scripts included in the Delivery Package against established coding standards and guidelines.
			S-DPS-42140	IR1	The operations staff shall have the capability to perform static analyses of source code for (at a minimum) argument mismatches and variables set before used.
			S-DPS-40295	IR1	The AITTL CI shall provide standards checking capabilities, including, but not limited to: a. Flagging whenever a bit operation is used on signed numbers. (C only) b. Flagging argument list mismatches (type and number of arguments).
PGS-0650#B	The PGS shall have the capability to validate required operational algorithm characteristics prior to scheduling algorithm test time. These characteristics shall be include at a minimum: a. Language b. Operational impacts (e.g., algorithm software size, required resources) c. Algorithm documentation d. Data handling standards as appropriate e. Units and models used f. Operational compatibility g. Required metadata outputs		S-DPS-40100	IR1	The AITTL CI shall provide the operations staff with the capability to display Science Software documentation stored in any of the following formats: a) PostScript, b) ASCII, c) Hypertext Markup Language (HTML), d) Microsoft Word, e) WordPerfect, f) Adobe Acrobat Portable Document Format (PDF).
			S-DPS-40110	IR1	The AITTL CI shall provide the operations staff with the capability to print Science Software documentation stored in any of the following formats: a) PostScript, b) ASCII, c) Hypertext Markup Language (HTML), d) Microsoft Word, e) WordPerfect, f) Adobe Acrobat Portable Document Format (PDF).
			S-DPS-40200	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in C complies with the ANSI standard specification for C.
			S-DPS-40210	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in FORTRAN77 complies with the ANSI standard specification for FORTRAN77.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-40230	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in FORTRAN 90 complies with the ANSI standard specification for FORTRAN 90.
			S-DPS-40250	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in Ada complies with the military specification MIL-STD-1815-A.
			S-DPS-40260	IR1	The AITTL CI shall have the capability to verify that Science Software source code is POSIX-compliant.
			S-DPS-40280	IR1	The AITTL CI shall have the capability to verify that Science Software source code and Science Software scripts follow the following SDP Toolkit usage requirements (from 194-809-SD4-001, PGS Toolkit Users Guide for the ECS Project): a. Source code does not make any prohibited POSIX function calls b. The Status Message Text Files have the correct format
			S-DPS-40320	IR1	The AITTL CI shall have the capability to verify that Science Software source code includes headers as specified in 423-16-01, Data Production Software and Science Computing Facility (SCF) Standards and Guidelines.
			S-DPS-40340	IR1	The AITTL CI shall have the capability to generate report files describing the results of standards checking.
			S-DPS-41050	IR1	The AITTL CI shall have the capability to generate report files discussing the results of profiling activities.
			S-DPS-42000	IR1	The AITTL CI shall provide the operations staff with the capability to view the metadata associated with a data file.
			S-DPS-42005	IR1	The AITTL CI shall provide the operations staff with the capability to edit the metadata associated with a data file.
			S-DPS-42010	IR1	The AITTL CI shall provide the operations staff with the capability to write the metadata associated with a data file to a report file.
			S-DPS-42110	IR1	The operations staff shall read and/or review all documentation included in the Delivery Package.
			S-DPS-42120	IR1	The operations staff shall perform automated checking of all source code included in the Delivery Package against established coding standards and guidelines.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-42130	IR1	The operations staff shall perform automated checking of all scripts included in the Delivery Package against established coding standards and guidelines.
			S-DPS-42140	IR1	The operations staff shall have the capability to perform static analyses of source code for (at a minimum) argument mismatches and variables set before used.
			S-DPS-42370	IR1	The operations staff shall collect during I&T the performance and resource utilization information needed for entry into or update of the PGE data base.
			S-DPS-40295	IR1	The AITTL CI shall provide standards checking capabilities, including, but not limited to: a. Flagging whenever a bit operation is used on signed numbers. (C only) b. Flagging argument list mismatches (type and number of arguments).
			S-DPS-42365	B	The operations staff shall have the capability to use MSS profiling capabilities to determine the computing resources utilized by the execution of a chain of PGEs.
PGS-0650#Ir1	The PGS shall have the capability to validate required operational algorithm characteristics prior to scheduling algorithm test time. These characteristics shall be include at a minimum: a. Language b. Operational impacts (e.g., algorithm software size, required resources) c. Algorithm documentation d. Data handling standards as appropriate e. Units and models used f. Operational compatibility g. Required metadata outputs		S-DPS-40100	IR1	The AITTL CI shall provide the operations staff with the capability to display Science Software documentation stored in any of the following formats: a) PostScript, b) ASCII, c) Hypertext Markup Language (HTML), d) Microsoft Word, e) WordPerfect, f) Adobe Acrobat Portable Document Format (PDF).
			S-DPS-40110	IR1	The AITTL CI shall provide the operations staff with the capability to print Science Software documentation stored in any of the following formats: a) PostScript, b) ASCII, c) Hypertext Markup Language (HTML), d) Microsoft Word, e) WordPerfect, f) Adobe Acrobat Portable Document Format (PDF).
			S-DPS-40200	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in C complies with the ANSI standard specification for C.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-40210	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in FORTRAN77 complies with the ANSI standard specification for FORTRAN77.
			S-DPS-40230	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in FORTRAN 90 complies with the ANSI standard specification for FORTRAN 90.
			S-DPS-40250	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in Ada complies with the military specification MIL-STD-1815-A.
			S-DPS-40260	IR1	The AITTL CI shall have the capability to verify that Science Software source code is POSIX-compliant.
			S-DPS-40280	IR1	The AITTL CI shall have the capability to verify that Science Software source code and Science Software scripts follow the following SDP Toolkit usage requirements (from 194-809-SD4-001, PGS Toolkit Users Guide for the ECS Project): a. Source code does not make any prohibited POSIX function calls b. The Status Message Text Files have the correct format
			S-DPS-40320	IR1	The AITTL CI shall have the capability to verify that Science Software source code includes headers as specified in 423-16-01, Data Production Software and Science Computing Facility (SCF) Standards and Guidelines.
			S-DPS-40340	IR1	The AITTL CI shall have the capability to generate report files describing the results of standards checking.
			S-DPS-40900	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified absolute threshold.
			S-DPS-40910	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified relative threshold.
			S-DPS-40920	IR1	The AITTL CI shall have the capability to generate report files describing the results of file comparisons.
			S-DPS-40930	IR1	The file comparison capability of the AITTL CI shall include the capability to read ASCII, binary, or HDF files.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-40940	IR1	The file comparison capability of the AITTL CI shall include the capability to allow the operations staff to specify a custom data format.
			S-DPS-41000	IR1	The AITTL CI shall have the capability to measure the CPU time of a process.
			S-DPS-41005	IR1	The AITTL CI shall have the capability to measure the wall clock time of a process.
			S-DPS-41010	IR1	The AITTL CI shall have the capability to measure the CPU time of each procedure within a process.
			S-DPS-41015	IR1	The AITTL CI shall have the capability to measure the wall clock time of each procedure within a process.
			S-DPS-41020	IR1	The AITTL CI shall have the capability to measure the memory usage of a process.
			S-DPS-41030	IR1	The AITTL CI shall have the capability to measure the disk space usage of a process.
			S-DPS-41035	IR1	The AITTL CI shall have the capability to count the number of page faults for a process.
			S-DPS-41040	IR1	The AITTL CI shall have the capability to count the number of I/O accesses made by a process to each of its input and output data files.
			S-DPS-41050	IR1	The AITTL CI shall have the capability to generate report files discussing the results of profiling activities.
			S-DPS-42000	IR1	The AITTL CI shall provide the operations staff with the capability to view the metadata associated with a data file.
			S-DPS-42005	IR1	The AITTL CI shall provide the operations staff with the capability to edit the metadata associated with a data file.
			S-DPS-42010	IR1	The AITTL CI shall provide the operations staff with the capability to write the metadata associated with a data file to a report file.
			S-DPS-42110	IR1	The operations staff shall read and/or review all documentation included in the Delivery Package.
			S-DPS-42120	IR1	The operations staff shall perform automated checking of all source code included in the Delivery Package against established coding standards and guidelines.
			S-DPS-42130	IR1	The operations staff shall perform automated checking of all scripts included in the Delivery Package against established coding standards and guidelines.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-42140	IR1	The operations staff shall have the capability to perform static analyses of source code for (at a minimum) argument mismatches and variables set before used.
			S-DPS-42360	IR1	The operations staff shall have the capability of determining the computing resources utilized by an execution of a PGE; viz., PGE CPU time, system CPU time, elapsed time, percent elapsed time, shared memory use, maximum memory used, number of page faults, number of swaps, number of block input operations, and number of block output operations.
			S-DPS-40295	IR1	The AITTL CI shall provide standards checking capabilities, including, but not limited to: a. Flagging whenever a bit operation is used on signed numbers. (C only) b. Flagging argument list mismatches (type and number of arguments).
PGS-0860#A	The PGS shall have the capability to schedule and coordinate algorithm and calibration coefficient test time in the test environment with the appropriate SCF.	A: Manual scheduling.	S-PLS-00730	A	The PLANG CI shall have the capability to plan algorithm and calibration coefficient test time in the test environment.
			S-PLS-01220	A	The PLANG CI shall have the capability to accept a request from the operations staff for scheduling algorithm and calibration coefficient test time in the test environment.
PGS-0860#B	The PGS shall have the capability to schedule and coordinate algorithm and calibration coefficient test time in the test environment with the appropriate SCF.	B: Automatic scheduling.	S-PLS-00730	A	The PLANG CI shall have the capability to plan algorithm and calibration coefficient test time in the test environment.
			S-PLS-01220	A	The PLANG CI shall have the capability to accept a request from the operations staff for scheduling algorithm and calibration coefficient test time in the test environment.
PGS-0860#Ir1	The PGS shall have the capability to schedule and coordinate algorithm and calibration coefficient test time in the test environment with the appropriate SCF.	IR-1 Manual interaction (e.g. phone call).			

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0870#A	The PGS shall have the capability to schedule algorithm test resources that do not interfere with the operational.	A: LaRC, MSFC, not production environments	S-PLS-00740	A	The PLANG CI shall have the capability to schedule algorithm test Data Processing Requests that do not interfere with the operational production environment.
			S-DPS-60500	A	The SPRHW CI shall be capable of supporting science software test without impact to normal operations.
PGS-0870#B	The PGS shall have the capability to schedule algorithm test resources that do not interfere with the operational production environment.		S-DPS-60500	A	The SPRHW CI shall be capable of supporting science software test without impact to normal operations.
			S-PLS-00741	B	The PLANG CI shall seperate AI&T activities from the operational production environment.
PGS-0900#A	The PGS shall send test products to the SCF for analysis. These shall contain the results of algorithm testing and shall contain the following information at a minimum: a. Algorithm identification b. Test time(s) c. Processor identification d. Test results		C-CSS-60500	IR1	The CSS File Access Service shall provide functionality for interactive and non-interactive transfer of files (send and receive) between two host systems.
			S-DSS-00680	A	The SDSRV CI shall be capable of receiving data from the AITTL CI.
			S-DSS-03440	A	The SDSRV CI shall interface with the STMGT CI to provide storage for Science Software Archive Packages.
			S-DSS-30520	A	The DDIST CI shall provide the capability to place Data in publicly available disks for users to "pull" the data, via ftp, at their discretion.
			S-DPS-42640	IR1	The operations staff shall have the capability to send the test results to the SCF for analysis.
			C-CSS-60510	IR1	The CSS File Access Service shall be capable of transferring ASCII and binary files.
			C-CSS-60610	IR1	The CSS File Access Service shall allow selection of the file type (ASCII or binary).

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			C-MSS-40000	A	The MSS configuration management application service at each site shall track the following items at the site by name and identifier: a. ECS subsystems, networks, and configured system and network devices such as workstations, servers, and routers b. ECS releases and site baselines c. ECS hardware and software resources designated as configuration items d. specifications asscoiated with configuration items e. technical documentation and test materials f. scientific algorithms, including software, data and test materials (DAACs only)
			C-CSS-60600	IR1	The CSS File Access Service shall provide connection oriented operation for file transfers.
			C-CSS-60620	IR1	The CSS File Access Service shall support proxy mode of operation which enables transfer of files between two remote hosts.
			C-CSS-60630	IR1	The CSS File Access Service shall provide capability to list remote files
			C-CSS-60640	IR1	The CSS File Access Service shall support wildcards in files on the remote host.
			C-CSS-60650	IR1	The CSS File Access service shall support anonymous FTP which allows read access to all users.
PGS-0900#B	The PGS shall send test products to the SCF for analysis. These shall contain the results of algorithm testing and shall contain the following information at a minimum: a. Algorithm identification b. Test time(s) c. Processor identification d. Test results		C-CSS-60500	IR1	The CSS File Access Service shall provide functionality for interactive and non-interactive transfer of files (send and receive) between two host systems.
			S-DSS-00680	A	The SDSRV CI shall be capable of receiving data from the AITTL CI.
			S-DSS-03440	A	The SDSRV CI shall interface with the STMGT CI to provide storage for Science Software Archive Packages.
			S-DSS-30520	A	The DDIST CI shall provide the capability to place Data in publicly available disks for users to "pull" the data, via ftp, at their discretion.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-42640	IR1	The operations staff shall have the capability to send the test results to the SCF for analysis.
			C-CSS-60510	IR1	The CSS File Access Service shall be capable of transferring ASCII and binary files.
			C-CSS-60610	IR1	The CSS File Access Service shall allow selection of the file type (ASCII or binary).
			C-MSS-40000	A	The MSS configuration management application service at each site shall track the following items at the site by name and identifier: a. ECS subsystems, networks, and configured system and network devices such as workstations, servers, and routers b. ECS releases and site baselines c. ECS hardware and software resources designated as configuration items d. specifications asscoiated with configuration items e. technical documentation and test materials f. scientific algorithms, including software, data and test materials (DAACs only)
			C-CSS-60600	IR1	The CSS File Access Service shall provide connection oriented operation for file transfers.
			C-CSS-60620	IR1	The CSS File Access Service shall support proxy mode of operation which enables transfer of files between two remote hosts.
			C-CSS-60630	IR1	The CSS File Access Service shall provide capability to list remote files
			C-CSS-60640	IR1	The CSS File Access Service shall support wildcards in files on the remote host.
			C-CSS-60650	IR1	The CSS File Access service shall support anonymous FTP which allows read access to all users.
PGS-0900#Ir1	The PGS shall send test products to the SCF for analysis. These shall contain the results of algorithm testing and shall contain the following information at a minimum: a. Algorithm identification b. Test time(s) c. Processor identification d. Test results	IR1: This requirement is supported as follows: IR1 shall provide the capability to transfer files to the SCF via ftp.	C-CSS-60500	IR1	The CSS File Access Service shall provide functionality for interactive and non-interactive transfer of files (send and receive) between two host systems.
			S-DPS-42640	IR1	The operations staff shall have the capability to send the test results to the SCF for analysis.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			C-CSS-60510	IR1	The CSS File Access Service shall be capable of transferring ASCII and binary files.
			C-CSS-60610	IR1	The CSS File Access Service shall allow selection of the file type (ASCII or binary).
			C-CSS-60600	IR1	The CSS File Access Service shall provide connection oriented operation for file transfers.
			C-CSS-60620	IR1	The CSS File Access Service shall support proxy mode of operation which enables transfer of files between two remote hosts.
			C-CSS-60630	IR1	The CSS File Access Service shall provide capability to list remote files
			C-CSS-60640	IR1	The CSS File Access Service shall support wildcards in files on the remote host.
			C-CSS-60650	IR1	The CSS File Access service shall support anonymous FTP which allows read access to all users.
PGS-0910#A	The PGS shall have the capability to support analysis of algorithm test results.		S-DPS-40700	A	The data visualization capability of the AITTL CI shall include the capability to display data in hexadecimal, octal, decimal, or ASCII form.
			S-DPS-40710	A	The data visualization capability of the AITTL CI shall include the capability to display data as a two- or three-dimensional image.
			S-DPS-40720	A	The data visualization capability of the AITTL CI shall include the capability to display data as a two- or three-dimensional plot.
			S-DPS-40730	A	The data visualization capability of the AITTL CI shall include the capability to difference data and to display the differences as a two- or three-dimensional image or plot.
			S-DPS-40740	A	The data visualization capability of the AITTL CI shall include the capability to produce and play a "movie loop" of data in two- or three-dimensional image or plot form.
			S-DPS-40750	A	The data visualization capability of the AITTL CI shall include the capability to display an arbitrary two-dimensional slice of a three-dimensional image or plot.
			S-DPS-40760	A	The data visualization capability of the AITTL CI shall include the capability to rotate a three-dimensional image or plot about an arbitrary axis.
			S-DPS-40770	A	The data visualization capability of the AITTL CI shall include providing the user with the option to specify the color table for new or existing image displays.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-40780	A	The data visualization capability of the AITTL CI shall include providing the user with the option to specify the axis limits for new or existing plot displays.
			S-DPS-40790	A	The data visualization capability of the AITTL CI shall include providing the operations staff with the option to specify the parameter assigned to each axis in new or existing plot or image displays.
			S-DPS-40800	A	The data visualization capability of the AITTL CI shall include the capability to display simultaneously multiple views of the same or different data in different windows.
			S-DPS-40810	A	The data visualization capability of the AITTL CI shall include the capability to save any plot, image, or hex/decimal/octal/ASCII dump to a file.
			S-DPS-40820	A	The data visualization capability of the AITTL CI shall include feature enhancement capabilities, including but not limited to (1) histogram equalization and (2) edge enhancement.
			S-DPS-40830	A	The data visualization capability of the AITTL CI shall include the capability to read ASCII, binary, or HDF files.
			S-DPS-40840	A	The data visualization capability of the AITTL CI shall include the capability to allow the operations staff to specify a custom input data format.
			S-DPS-40900	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified absolute threshold.
			S-DPS-40910	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified relative threshold.
			S-DPS-40920	IR1	The AITTL CI shall have the capability to generate report files describing the results of file comparisons.
			S-DPS-40930	IR1	The file comparison capability of the AITTL CI shall include the capability to read ASCII, binary, or HDF files.
			S-DPS-40940	IR1	The file comparison capability of the AITTL CI shall include the capability to allow the operations staff to specify a custom data format.
			S-DPS-42510	IR1	The operations staff shall have the capability of displaying Data Products.
			S-DPS-42520	IR1	The operations staff shall have the capability of displaying data in intermediate files used to generate a Data Product.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-42530	IR1	The operations staff shall have the capability of displaying data in input files used to generate a Data Product.
			S-DPS-42540	IR1	The operations staff shall have the capability of displaying data in coefficient files used to generate a Data Product.
			S-DPS-42550	IR1	The operations staff shall have the capability of displaying the Ancillary Data used to generate a Data Product .
			S-DPS-42570	IR1	The operations staff shall have the capability of displaying all metadata associated with the generation of a Data Product.
			S-DPS-42580	IR1	The operations staff shall have the capability of comparing data in two coefficient files.
			S-DPS-42590	IR1	The operations staff shall have the capability of comparing two Data Product files.
			S-DPS-42600	IR1	The operations staff shall have the capability of comparing data in two intermediate files.
			S-DPS-42650	IR1	The operations staff shall have the capability to write ad hoc test tools using the perl, C shell or Bourne shell script languages.
			S-DPS-42660	IR1	The operations staff shall have the capability to write ad hoc test tools using the FORTRAN77, FORTRAN 90 and C programming languages.
			S-DPS-42750	IR1	The operations staff shall have the capability of record each step performed during I&T, the results and actions initiated, if any.
			S-DPS-42760	IR1	The operations staff shall report on the status of the I&T activities each PGE.
			S-DPS-42770	IR1	The operations staff shall have the capability of writing an Inspection Report for each Science Software Delivery.
			S-DPS-42780	IR1	The operations staff shall have the capability of writing an Integration Report for each Science Software Delivery.
			S-DPS-42790	IR1	The operations staff shall have the capability of writing an Acceptance Test Report for each Science Software Delivery.
PGS-0910#B	The PGS shall have the capability to support analysis of algorithm test results.		S-DPS-40700	A	The data visualization capability of the AITTL CI shall include the capability to display data in hexadecimal, octal, decimal, or ASCII form.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-40710	A	The data visualization capability of the AITTL CI shall include the capability to display data as a two- or three-dimensional image.
			S-DPS-40720	A	The data visualization capability of the AITTL CI shall include the capability to display data as a two- or three-dimensional plot.
			S-DPS-40730	A	The data visualization capability of the AITTL CI shall include the capability to difference data and to display the differences as a two- or three-dimensional image or plot.
			S-DPS-40740	A	The data visualization capability of the AITTL CI shall include the capability to produce and play a "movie loop" of data in two- or three-dimensional image or plot form.
			S-DPS-40750	A	The data visualization capability of the AITTL CI shall include the capability to display an arbitrary two-dimensional slice of a three-dimensional image or plot.
			S-DPS-40760	A	The data visualization capability of the AITTL CI shall include the capability to rotate a three-dimensional image or plot about an arbitrary axis.
			S-DPS-40770	A	The data visualization capability of the AITTL CI shall include providing the user with the option to specify the color table for new or existing image displays.
			S-DPS-40780	A	The data visualization capability of the AITTL CI shall include providing the user with the option to specify the axis limits for new or existing plot displays.
			S-DPS-40790	A	The data visualization capability of the AITTL CI shall include providing the operations staff with the option to specify the parameter assigned to each axis in new or existing plot or image displays.
			S-DPS-40800	A	The data visualization capability of the AITTL CI shall include the capability to display simultaneously multiple views of the same or different data in different windows.
			S-DPS-40810	A	The data visualization capability of the AITTL CI shall include the capability to save any plot, image, or hex/decimal/octal/ASCII dump to a file.
			S-DPS-40820	A	The data visualization capability of the AITTL CI shall include feature enhancement capabilities, including but not limited to (1) histogram equalization and (2) edge enhancement.
			S-DPS-40830	A	The data visualization capability of the AITTL CI shall include the capability to read ASCII, binary, or HDF files.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-40840	A	The data visualization capability of the AITTL CI shall include the capability to allow the operations staff to specify a custom input data format.
			S-DPS-40900	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified absolute threshold.
			S-DPS-40910	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified relative threshold.
			S-DPS-40920	IR1	The AITTL CI shall have the capability to generate report files describing the results of file comparisons.
			S-DPS-40930	IR1	The file comparison capability of the AITTL CI shall include the capability to read ASCII, binary, or HDF files.
			S-DPS-40940	IR1	The file comparison capability of the AITTL CI shall include the capability to allow the operations staff to specify a custom data format.
			S-DPS-42510	IR1	The operations staff shall have the capability of displaying Data Products.
			S-DPS-42520	IR1	The operations staff shall have the capability of displaying data in intermediate files used to generate a Data Product.
			S-DPS-42530	IR1	The operations staff shall have the capability of displaying data in input files used to generate a Data Product.
			S-DPS-42540	IR1	The operations staff shall have the capability of displaying data in coefficient files used to generate a Data Product.
			S-DPS-42550	IR1	The operations staff shall have the capability of displaying the Ancillary Data used to generate a Data Product .
			S-DPS-42570	IR1	The operations staff shall have the capability of displaying all metadata associated with the generation of a Data Product.
			S-DPS-42580	IR1	The operations staff shall have the capability of comparing data in two coefficient files.
			S-DPS-42590	IR1	The operations staff shall have the capability of comparing two Data Product files.
			S-DPS-42600	IR1	The operations staff shall have the capability of comparing data in two intermediate files.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-42650	IR1	The operations staff shall have the capability to write ad hoc test tools using the perl, C shell or Bourne shell script languages.
			S-DPS-42660	IR1	The operations staff shall have the capability to write ad hoc test tools using the FORTRAN77, FORTRAN 90 and C programming languages.
			S-DPS-42750	IR1	The operations staff shall have the capability of record each step performed during I&T, the results and actions initiated, if any.
			S-DPS-42760	IR1	The operations staff shall report on the status of the I&T activities each PGE.
			S-DPS-42770	IR1	The operations staff shall have the capability of writing an Inspection Report for each Science Software Delivery.
			S-DPS-42780	IR1	The operations staff shall have the capability of writing an Integration Report for each Science Software Delivery.
			S-DPS-42790	IR1	The operations staff shall have the capability of writing an Acceptance Test Report for each Science Software Delivery.
PGS-0910#Ir1	The PGS shall have the capability to support analysis of algorithm test results.	IR1: Accomplished via comparison tools.	S-DPS-40900	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified absolute threshold.
			S-DPS-40910	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified relative threshold.
			S-DPS-40920	IR1	The AITTL CI shall have the capability to generate report files describing the results of file comparisons.
			S-DPS-40930	IR1	The file comparison capability of the AITTL CI shall include the capability to read ASCII, binary, or HDF files.
			S-DPS-40940	IR1	The file comparison capability of the AITTL CI shall include the capability to allow the operations staff to specify a custom data format.
			S-DPS-42510	IR1	The operations staff shall have the capability of displaying Data Products.
			S-DPS-42520	IR1	The operations staff shall have the capability of displaying data in intermediate files used to generate a Data Product.
			S-DPS-42530	IR1	The operations staff shall have the capability of displaying data in input files used to generate a Data Product.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-42540	IR1	The operations staff shall have the capability of displaying data in coefficient files used to generate a Data Product.
			S-DPS-42550	IR1	The operations staff shall have the capability of displaying the Ancillary Data used to generate a Data Product .
			S-DPS-42570	IR1	The operations staff shall have the capability of displaying all metadata associated with the generation of a Data Product.
			S-DPS-42580	IR1	The operations staff shall have the capability of comparing data in two coefficient files.
			S-DPS-42590	IR1	The operations staff shall have the capability of comparing two Data Product files.
			S-DPS-42600	IR1	The operations staff shall have the capability of comparing data in two intermediate files.
			S-DPS-42650	IR1	The operations staff shall have the capability to write ad hoc test tools using the perl, C shell or Bourne shell script languages.
			S-DPS-42660	IR1	The operations staff shall have the capability to write ad hoc test tools using the FORTRAN77, FORTRAN 90 and C programming languages.
			S-DPS-42750	IR1	The operations staff shall have the capability of record each step performed during I&T, the results and actions initiated, if any.
			S-DPS-42760	IR1	The operations staff shall report on the status of the I&T activities each PGE.
			S-DPS-42770	IR1	The operations staff shall have the capability of writing an Inspection Report for each Science Software Delivery.
			S-DPS-42780	IR1	The operations staff shall have the capability of writing an Integration Report for each Science Software Delivery.
			S-DPS-42790	IR1	The operations staff shall have the capability of writing an Acceptance Test Report for each Science Software Delivery.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0920#A	The PGS shall have the capability to validate, through testing, that SCF processing algorithms will execute properly in the operational environment. Validation shall include final compilation and linkage of the source code and testing to verify proper software execution in the operational environment based on indicated data and test results provided by the SCF and the investigator, but shall not include scientific validation of products.		S-PLS-61210	A	The operating system for each Unix platform in the PLNHW CI shall conform to the POSIX.2 standard.
			S-PLS-61220	A	Each PLNHW CI POSIX.2 compliant platform shall have the following utilities installed at a minimum: perl, emacs, gzip, tar, imake, prof, gprof, nm.
			S-PLS-61230	A	Each PLNHW CI POSIX.2 compliant platform shall have the following POSIX.2 user Portability Utilities installed at a minimum: man, vi.
			S-PLS-61240	A	Each PLNHW CI platform shall have the following POSIX.2 Software Development utilities installed: make, imake.
			S-PLS-61260	A	Each PLNHW CI POSIX.2 compliant platform shall have the following Unix shells installed at a minimum: C shell, Bourne shell, Korn shell.
			S-DPS-40200	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in C complies with the ANSI standard specification for C.
			S-DPS-40210	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in FORTRAN77 complies with the ANSI standard specification for FORTRAN77.
			S-DPS-40230	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in FORTRAN 90 complies with the ANSI standard specification for FORTRAN 90.
			S-DPS-40250	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in Ada complies with the military specification MIL-STD-1815-A.
			S-DPS-40400	IR1	The AITTL CI shall have the capability to determine if the Science Software contains memory leaks.
			S-DPS-40405	IR1	The AITTL CI shall have the capability to determine if the Science Software contains out of bounds indexing.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-40430	IR1	The AITTL CI shall have the capability to generate report files describing the results of code analysis.
			S-DPS-40900	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified absolute threshold.
			S-DPS-40910	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified relative threshold.
			S-DPS-40920	IR1	The AITTL CI shall have the capability to generate report files describing the results of file comparisons.
			S-DPS-40930	IR1	The file comparison capability of the AITTL CI shall include the capability to read ASCII, binary, or HDF files.
			S-DPS-40940	IR1	The file comparison capability of the AITTL CI shall include the capability to allow the operations staff to specify a custom data format.
			S-DPS-41000	IR1	The AITTL CI shall have the capability to measure the CPU time of a process.
			S-DPS-41005	IR1	The AITTL CI shall have the capability to measure the wall clock time of a process.
			S-DPS-41010	IR1	The AITTL CI shall have the capability to measure the CPU time of each procedure within a process.
			S-DPS-41015	IR1	The AITTL CI shall have the capability to measure the wall clock time of each procedure within a process.
			S-DPS-41020	IR1	The AITTL CI shall have the capability to measure the memory usage of a process.
			S-DPS-41030	IR1	The AITTL CI shall have the capability to measure the disk space usage of a process.
			S-DPS-41035	IR1	The AITTL CI shall have the capability to count the number of page faults for a process.
			S-DPS-41040	IR1	The AITTL CI shall have the capability to count the number of I/O accesses made by a process to each of its input and output data files.
			S-DPS-41895	IR1	The AITTL CI shall provide to the operations staff the capability to retrieve a specified data file from local DAAC storage.
			S-DPS-41900	A	The AITTL CI shall provide to the operations staff, via a GUI, the capability to retrieve a specified data file from a specified Data Server.
			S-DPS-42000	IR1	The AITTL CI shall provide the operations staff with the capability to view the metadata associated with a data file.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-42005	IR1	The AITTL CI shall provide the operations staff with the capability to edit the metadata associated with a data file.
			S-DPS-42010	IR1	The AITTL CI shall provide the operations staff with the capability to write the metadata associated with a data file to a report file.
			S-DPS-42310	IR1	The operations staff shall link FORTRAN77, FORTRAN 90 and C object code with the DAAC version of the SDP Toolkit.
			S-DPS-42315	IR1	The operations staff shall link Ada object code for CERES with the DAAC version of the SDP Toolkit.
			S-DPS-42320	IR1	The operations staff shall have the capability to link FORTRAN77, FORTRAN 90 and C object code with other libraries.
			S-DPS-42325	IR1	The operations staff shall have the capability to link Ada object code for CERES with other libraries.
			S-DPS-42340	A	The operations staff shall have the capability to perform dynamic analyses of source code for (at a minimum) memory leaks, out of bounds indexing, and distribution of resource demands.
			S-DPS-42350	IR1	The operations staff shall have the capability to execute perl, C shell or Bourne shell scripts.
			S-DPS-42360	IR1	The operations staff shall have the capability of determining the computing resources utilized by an execution of a PGE; viz., PGE CPU time, system CPU time, elapsed time, percent elapsed time, shared memory use, maximum memory used, number of page faults, number of swaps, number of block input operations, and number of block output operations.
			S-DPS-42500	IR1	The operations staff shall execute the Test Plans included in the Delivery Package.
			S-DPS-42560	IR1	The operations staff shall have the capability of viewing the Status Information files associated with the generated Data Product.
			S-DPS-42630	A	The operations staff shall have the capability of run PGEs in a parallel test or for a commissioning period, utilizing the Planning and Processing Subsystems and the Product output flagged as "test".
			S-DPS-61120	IR1	The SPRHW CI POSIX.2 compliant platform shall have the following utilities installed at a minimum: perl, emacs, gzip, tar, imake, prof, gprof, nm.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-61130	IR1	The SPRHW CI POSIX.2 compliant platform shall have the following POSIX.2 user Portability Utilities installed at a minimum: man, vi.
			S-DPS-61140	IR1	The SPRHW CI POSIX.2 compliant platform shall have the following POSIX.2 Software Development Utilities installed at a minimum: make.
			S-DPS-61150	IR1	The SPRHW CI POSIX.2 compliant platform shall have the following POSIX.2 C-Language Development Utilities installedat a minimum: lex, yacc.
			S-DPS-61160	IR1	The SPRHW CI POSIX.2 compliant platform shall have the following Unix shells installed at a minimum: C shell, Bourne shell, Korn shell.
			S-DPS-61170	IR1	The SPRHW CI POSIX.2 compliant platform shall have on-line documentation or printed documentation for each installed tool.
			S-DPS-70183	IR1	The AITHW CI POSIX.2 compliant platform shall have on-line documentation or printed documentation for each installed tool.
			S-DPS-80155	A	The AQAHW CI POSIX.2 compliant platform shall have on-line documentation or printed documentation for each installed tool.
			S-DPS-70130	IR1	The AITHW CI POSIX.2 compliant platform ishall have the following POSIX.2 User Portability Utilities installed at a minmum: man, vi.
			S-DPS-70120	IR1	The AITHW CI POSIX.2 compliant platform shall have the following utilities installed at a minimum: perl, emacs, gzip, tar, imake, prof, gprof, nm.
			S-DPS-70110	IR1	The operating system for each UNIX platform in the AITHW CI shall conform to the POSIX.2 standard.
			S-DPS-70140	IR1	The AITHW CI POSIX.2 compliant platform shall have the following POSIX.2 Software Development Utilities installed at a minimum: make.
			S-DPS-70150	IR1	The AITHW CI POSIX.2 compliant platform shall have the following POSIX.2 C-Language Development Utilities installed at a minimum: lex, yacc.
			S-DPS-70160	IR1	The AITHW CI POSIX.2 compliant platform shall have the following Unix shells installed at a minimum: C shell, Bourne shell, Korn shell.
			S-DPS-70180	IR1	The AITHW CI shall have provision for a dynamic analyzer to support the capability to check Science Software source code for memory leaks.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-70190	IR1	The AITHW CI POSIX.2 compliant platform shall have installed one or more development environment supporting the following languages: a. C b. C++ c. FORTRAN 77 d. FORTRAN 90
			S-DPS-40295	IR1	The AITTL CI shall provide standards checking capabilities, including, but not limited to: a. Flagging whenever a bit operation is used on signed numbers. (C only) b. Flagging argument list mismatches (type and number of arguments).
			S-DPS-61110	IR1	The operating system for each Unix platform in the SPRHW CI shall conform to the POSIX.2 standard.
PGS-0920#B	The PGS shall have the capability to validate, through testing, that SCF processing algorithms will execute properly in the operational environment. Validation shall include final compilation and linkage of the source code and testing to verify proper software execution in the operational environment based on indicated data and test results provided by the SCF and the investigator, but shall not include scientific validation of products.	B: AM-1, COLOR Transfer of algorithm implies verifying proper resource utilization resources. Transfer of algorithm implies verifying proper resource utilization resources.	S-PLS-61210	A	The operating system for each Unix platform in the PLNHW CI shall conform to the POSIX.2 standard.
			S-PLS-61220	A	Each PLNHW CI POSIX.2 compliant platform shall have the following utilities installed at a minimum: perl, emacs, gzip, tar, imake, prof, gprof, nm.
			S-PLS-61230	A	Each PLNHW CI POSIX.2 compliant platform shall have the following POSIX.2 user Portability Utilities installed at a minimum: man, vi.
			S-PLS-61240	A	Each PLNHW CI platform shall have the following POSIX.2 Software Development utilities installed: make, imake.
			S-PLS-61260	A	Each PLNHW CI POSIX.2 compliant platform shall have the following Unix shells installed at a minimum: C shell, Bourne shell, Korn shell.
			S-DPS-40200	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in C complies with the ANSI standard specification for C.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-40210	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in FORTRAN77 complies with the ANSI standard specification for FORTRAN77.
			S-DPS-40230	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in FORTRAN 90 complies with the ANSI standard specification for FORTRAN 90.
			S-DPS-40250	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in Ada complies with the military specification MIL-STD-1815-A.
			S-DPS-40400	IR1	The AITTL CI shall have the capability to determine if the Science Software contains memory leaks.
			S-DPS-40405	IR1	The AITTL CI shall have the capability to determine if the Science Software contains out of bounds indexing.
			S-DPS-40430	IR1	The AITTL CI shall have the capability to generate report files describing the results of code analysis.
			S-DPS-40900	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified absolute threshold.
			S-DPS-40910	IR1	The AITTL CI shall have the capability to find all differences between two data files which are greater than some specified relative threshold.
			S-DPS-40920	IR1	The AITTL CI shall have the capability to generate report files describing the results of file comparisons.
			S-DPS-40930	IR1	The file comparison capability of the AITTL CI shall include the capability to read ASCII, binary, or HDF files.
			S-DPS-40940	IR1	The file comparison capability of the AITTL CI shall include the capability to allow the operations staff to specify a custom data format.
			S-DPS-41000	IR1	The AITTL CI shall have the capability to measure the CPU time of a process.
			S-DPS-41005	IR1	The AITTL CI shall have the capability to measure the wall clock time of a process.
			S-DPS-41010	IR1	The AITTL CI shall have the capability to measure the CPU time of each procedure within a process.
			S-DPS-41015	IR1	The AITTL CI shall have the capability to measure the wall clock time of each procedure within a process.
			S-DPS-41020	IR1	The AITTL CI shall have the capability to measure the memory usage of a process.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-41030	IR1	The AITTL CI shall have the capability to measure the disk space usage of a process.
			S-DPS-41035	IR1	The AITTL CI shall have the capability to count the number of page faults for a process.
			S-DPS-41040	IR1	The AITTL CI shall have the capability to count the number of I/O accesses made by a process to each of its input and output data files.
			S-DPS-41895	IR1	The AITTL CI shall provide to the operations staff the capability to retrieve a specified data file from local DAAC storage.
			S-DPS-41900	A	The AITTL CI shall provide to the operations staff, via a GUI, the capability to retrieve a specified data file from a specified Data Server.
			S-DPS-42000	IR1	The AITTL CI shall provide the operations staff with the capability to view the metadata associated with a data file.
			S-DPS-42005	IR1	The AITTL CI shall provide the operations staff with the capability to edit the metadata associated with a data file.
			S-DPS-42010	IR1	The AITTL CI shall provide the operations staff with the capability to write the metadata associated with a data file to a report file.
			S-DPS-42310	IR1	The operations staff shall link FORTRAN77, FORTRAN 90 and C object code with the DAAC version of the SDP Toolkit.
			S-DPS-42315	IR1	The operations staff shall link Ada object code for CERES with the DAAC version of the SDP Toolkit.
			S-DPS-42320	IR1	The operations staff shall have the capability to link FORTRAN77, FORTRAN 90 and C object code with other libraries.
			S-DPS-42325	IR1	The operations staff shall have the capability to link Ada object code for CERES with other libraries.
			S-DPS-42340	A	The operations staff shall have the capability to perform dynamic analyses of source code for (at a minimum) memory leaks, out of bounds indexing, and distribution of resource demands.
			S-DPS-42350	IR1	The operations staff shall have the capability to execute perl, C shell or Bourne shell scripts.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-42360	IR1	The operations staff shall have the capability of determining the computing resources utilized by an execution of a PGE; viz., PGE CPU time, system CPU time, elapsed time, percent elapsed time, shared memory use, maximum memory used, number of page faults, number of swaps, number of block input operations, and number of block output operations.
			S-DPS-42500	IR1	The operations staff shall execute the Test Plans included in the Delivery Package.
			S-DPS-42560	IR1	The operations staff shall have the capability of viewing the Status Information files associated with the generated Data Product.
			S-DPS-42630	A	The operations staff shall have the capability of run PGEs in a parallel test or for a commissioning period, utilizing the Planning and Processing Subsystems and the Product output flagged as "test".
			S-DPS-61130	IR1	The SPRHW CI POSIX.2 compliant platform shall have the following POSIX.2 user Portability Utilities installed at a minimum: man, vi.
			S-DPS-61140	IR1	The SPRHW CI POSIX.2 compliant platform shall have the following POSIX.2 Software Development Utilities installed at a minimum: make.
			S-DPS-61150	IR1	The SPRHW CI POSIX.2 compliant platform shall have the following POSIX.2 C-Language Development Utilities installedat a minimum: lex, yacc.
			S-DPS-61160	IR1	The SPRHW CI POSIX.2 compliant platform shall have the following Unix shells installed at a minimum: C shell, Bourne shell, Korn shell.
			S-DPS-61170	IR1	The SPRHW CI POSIX.2 compliant platform shall have on-line documentation or printed documentation for each installed tool.
			S-DPS-70183	IR1	The AITHW CI POSIX.2 compliant platform shall have on-line documentation or printed documentation for each installed tool.
			S-DPS-80155	A	The AQAHW CI POSIX.2 compliant platform shall have on-line documentation or printed documentation for each installed tool.
			S-DPS-70130	IR1	The AITHW CI POSIX.2 compliant platform ishall have the following POSIX.2 User Portability Utilities installed at a minmum: man, vi.
			S-DPS-70120	IR1	The AITHW CI POSIX.2 compliant platform shall have the following utilities installed at a minimum: perl, emacs, gzip, tar, imake, prof, gprof, nm.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-70110	IR1	The operating system for each UNIX platform in the AITHW CI shall conform to the POSIX.2 standard.
			S-DPS-70140	IR1	The AITHW CI POSIX.2 compliant platform shall have the following POSIX.2 Software Development Utilities installed at a minimum: make.
			S-DPS-70150	IR1	The AITHW CI POSIX.2 compliant platform shall have the following POSIX.2 C-Language Development Utilities installed at a minimum: lex, yacc.
			S-DPS-70160	IR1	The AITHW CI POSIX.2 compliant platform shall have the following Unix shells installed at a minimum: C shell, Bourne shell, Korn shell.
			S-DPS-70180	IR1	The AITHW CI shall have provision for a dynamic analyzer to support the capability to check Science Software source code for memory leaks.
			S-DPS-70190	IR1	The AITHW CI POSIX.2 compliant platform shall have installed one or more development environment supporting the following languages: a. C b. C++ c. FORTRAN 77 d. FORTRAN 90
			S-DPS-40295	IR1	The AITTL CI shall provide standards checking capabilities, including, but not limited to: a. Flagging whenever a bit operation is used on signed numbers. (C only) b. Flagging argument list mismatches (type and number of arguments).
			S-DPS-61125	B	The SPRHW CI POSIX.2 compliant platform shall have the following utilities installed at a minimum: perl, emacs, gzip, tar, imake, prof, gprof, nm, gtar, and gmake.
			S-DPS-61110	IR1	The operating system for each Unix platform in the SPRHW CI shall conform to the POSIX.2 standard.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0920#Ir1	The PGS shall have the capability to validate, through testing, that SCF processing algorithms will execute properly in the operational environment. Validation shall include final compilation and linkage of the source code and testing to verify proper software execution in the operational environment based on indicated data and test results provided by the SCF and the investigator, but shall not include scientific validation of products.		S-DPS-40200	IR1	The AITTL CI shall have the capability to verify that Science Software source code written in C complies with the ANSI standard specification for C.
			S-DPS-40400	IR1	The AITTL CI shall have the capability to determine if the Science Software contains memory leaks.
			S-DPS-40405	IR1	The AITTL CI shall have the capability to determine if the Science Software contains out of bounds indexing.
			S-DPS-40430	IR1	The AITTL CI shall have the capability to generate report files describing the results of code analysis.
			S-DPS-41000	IR1	The AITTL CI shall have the capability to measure the CPU time of a process.
			S-DPS-41020	IR1	The AITTL CI shall have the capability to measure the memory usage of a process.
			S-DPS-41030	IR1	The AITTL CI shall have the capability to measure the disk space usage of a process.
			S-DPS-41035	IR1	The AITTL CI shall have the capability to count the number of page faults for a process.
			S-DPS-41040	IR1	The AITTL CI shall have the capability to count the number of I/O accesses made by a process to each of its input and output data files.
			S-DPS-41895	IR1	The AITTL CI shall provide to the operations staff the capability to retrieve a specified data file from local DAAC storage.
			S-DPS-42000	IR1	The AITTL CI shall provide the operations staff with the capability to view the metadata associated with a data file.
			S-DPS-42005	IR1	The AITTL CI shall provide the operations staff with the capability to edit the metadata associated with a data file.
			S-DPS-42010	IR1	The AITTL CI shall provide the operations staff with the capability to write the metadata associated with a data file to a report file.

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-42310	IR1	The operations staff shall link FORTRAN77, FORTRAN 90 and C object code with the DAAC version of the SDP Toolkit.
			S-DPS-42315	IR1	The operations staff shall link Ada object code for CERES with the DAAC version of the SDP Toolkit.
			S-DPS-42320	IR1	The operations staff shall have the capability to link FORTRAN77, FORTRAN 90 and C object code with other libraries.
			S-DPS-42325	IR1	The operations staff shall have the capability to link Ada object code for CERES with other libraries.
			S-DPS-42350	IR1	The operations staff shall have the capability to execute perl, C shell or Bourne shell scripts.
			S-DPS-42500	IR1	The operations staff shall execute the Test Plans included in the Delivery Package.
			S-DPS-42560	IR1	The operations staff shall have the capability of viewing the Status Information files associated with the generated Data Product.
			S-DPS-61120	IR1	The SPRHW CI POSIX.2 compliant platform shall have the following utilities installed at a minimum: perl, emacs, gzip, tar, imake, prof, gprof, nm.
			S-DPS-61130	IR1	The SPRHW CI POSIX.2 compliant platform shall have the following POSIX.2 user Portability Utilities installed at a minimum: man, vi.
			S-DPS-61140	IR1	The SPRHW CI POSIX.2 compliant platform shall have the following POSIX.2 Software Development Utilities installed at a minimum: make.
			S-DPS-61150	IR1	The SPRHW CI POSIX.2 compliant platform shall have the following POSIX.2 C-Language Development Utilities installedat a minimum: lex, yacc.
			S-DPS-61160	IR1	The SPRHW CI POSIX.2 compliant platform shall have the following Unix shells installed at a minimum: C shell, Bourne shell, Korn shell.
			S-DPS-61170	IR1	The SPRHW CI POSIX.2 compliant platform shall have on-line documentation or printed documentation for each installed tool.
			S-DPS-70183	IR1	The AITHW CI POSIX.2 compliant platform shall have on-line documentation or printed documentation for each installed tool.
			S-DPS-70130	IR1	The AITHW CI POSIX.2 compliant platform ishall have the following POSIX.2 User Portability Utilities installed at a minmum: man, vi.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-70120	IR1	The AITHW CI POSIX.2 compliant platform shall have the following utilities installed at a minimum: perl, emacs, gzip, tar, imake, prof, gprof, nm.
			S-DPS-70110	IR1	The operating system for each UNIX platform in the AITHW CI shall conform to the POSIX.2 standard.
			S-DPS-70140	IR1	The AITHW CI POSIX.2 compliant platform shall have the following POSIX.2 Software Development Utilities installed at a minimum: make.
			S-DPS-70150	IR1	The AITHW CI POSIX.2 compliant platform shall have the following POSIX.2 C-Language Development Utilities installed at a minimum: lex, yacc.
			S-DPS-70160	IR1	The AITHW CI POSIX.2 compliant platform shall have the following Unix shells installed at a minimum: C shell, Bourne shell, Korn shell.
			S-DPS-70180	IR1	The AITHW CI shall have provision for a dynamic analyzer to support the capability to check Science Software source code for memory leaks.
			S-DPS-70190	IR1	The AITHW CI POSIX.2 compliant platform shall have installed one or more development environment supporting the following languages: a. C b. C++ c. FORTRAN 77 d. FORTRAN 90
			S-DPS-40295	IR1	The AITTL CI shall provide standards checking capabilities, including, but not limited to: a. Flagging whenever a bit operation is used on signed numbers. (C only) b. Flagging argument list mismatches (type and number of arguments).
			S-DPS-61110	IR1	The operating system for each Unix platform in the SPRHW CI shall conform to the POSIX.2 standard.
PGS-0925#A	The PGS shall validate algorithms used for conversions, calibrations and transformations of EOS engineering data.	Algorithms used for converting EOS engineering data into HDF-EOS format will undergo normal I&T procedures for validation.			

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0925#B	The PGS shall validate algorithms used for conversions, calibrations and transformations of EOS engineering data.	Algorithms used for converting EOS engineering data into HDF-EOS format will undergo normal I&T procedures for validation.			
PGS-0925#Ir1	The PGS shall validate algorithms used for conversions, calibrations and transformations of EOS engineering data.				
PGS-0930#A	The PGS shall have the capability to transfer validated algorithm software and calibration coefficients from the test environment to the operational environment to be used in the production of Standard Products.	A: TRMM Transfer of algorithm implies verifying proper resource utilization resources.	S-PLS-00430	A	The PLANG CI shall support the capability to (a) allow (authorized) operations staff updates (enter / modify / delete) of PGE information in the Planning PGE information database, (b) maintain a record of updates made.
			S-DPS-41300	A	The AITTL CI shall provide to the operations staff, via a GUI, the capability to display a list of PGE Database Entries.
			S-DPS-41310	A	The AITTL CI shall provide to the operations staff, via a GUI, the capability to display a specific PGE Database Entry.
			S-DPS-41320	A	The AITTL CI shall provide to the operations staff, via a GUI, the capability to modify a specific PGE Database Entry.
			S-DPS-41330	A	The AITTL CI shall provide to the operations staff, via a GUI, the capability to add a new PGE Database Entry.
			S-DPS-41340	A	The AITTL CI shall provide to the operations staff, via a GUI, the capability to remove a specific PGE Database Entry.
			S-DPS-41350	A	The AITTL CI shall provide to the operations staff, via a GUI, cut, copy, and paste capability for a PGE Database Entry.
PGS-0930#B	The PGS shall have the capability to transfer validated algorithm software and calibration coefficients from the test environment to the operational environment to be used in the production of Standard Products.	B: AM-1, COLOR Transfer of algorithm implies verifying proper resource utilization resources.	S-PLS-00430	A	The PLANG CI shall support the capability to (a) allow (authorized) operations staff updates (enter / modify / delete) of PGE information in the Planning PGE information database, (b) maintain a record of updates made.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-41300	A	The AITTL CI shall provide to the operations staff, via a GUI, the capability to display a list of PGE Database Entries.
			S-DPS-41310	A	The AITTL CI shall provide to the operations staff, via a GUI, the capability to display a specific PGE Database Entry.
			S-DPS-41320	A	The AITTL CI shall provide to the operations staff, via a GUI, the capability to modify a specific PGE Database Entry.
			S-DPS-41330	A	The AITTL CI shall provide to the operations staff, via a GUI, the capability to add a new PGE Database Entry.
			S-DPS-41340	A	The AITTL CI shall provide to the operations staff, via a GUI, the capability to remove a specific PGE Database Entry.
			S-DPS-41350	A	The AITTL CI shall provide to the operations staff, via a GUI, cut, copy, and paste capability for a PGE Database Entry.
			S-DPS-42610	IR1	The operations staff shall enter new PGEs into the PGE Database, along with their performance and resource utilization information.
			S-DPS-42620	IR1	The operations staff shall update information the PGE Database as necessary to reflect changes in performance and resource utilization resulting from a modification to a PGE.
			S-DPS-41355	B	The AITTL CI SSAP GUI for updating the PGE Database shall provide the operations staff with the ability (a) to restrict update access to the PGE Database to authorized personnel and (b) to maintain a record of updates made.
			S-DPS-41360	B	The AITTL CI SSAP GUI for updating the PGE Database shall have the capability of accepting its inputs from a file.
PGS-0940#A	The PGS shall provide storage for all candidate algorithms' software executables and calibration coefficients.		S-DPS-60050	IR1	The SPRHW CI shall contain and/or provide access to staging (working storage), I/O and processing resources necessary to perform routine processing.
PGS-0940#B	The PGS shall provide storage for all candidate algorithms' software executables and calibration coefficients.		S-DPS-42100	IR1	The operations staff shall place a Science Software Delivery Package in a non-public directory accessible to the hardware scheduled to be used for I&T.
			S-DPS-60050	IR1	The SPRHW CI shall contain and/or provide access to staging (working storage), I/O and processing resources necessary to perform routine processing.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0940#Ir1	The PGS shall provide storage for all candidate algorithms' software executables and calibration coefficients.		S-DPS-60050	IR1	The SPRHW CI shall contain and/or provide access to staging (working storage), I/O and processing resources necessary to perform routine processing.
PGS-0950#A	The PGS shall interface to maintain configuration control of all algorithms and calibration coefficients used in operational Standard Product production. Controlled information shall contain at a minimum: a. Source code including version number and author b. Benchmark test procedures, test data, and results c. Date and time of operational installation d. Compiler identification and version e. Final algorithm documentation		C-MSS-40000	A	The MSS configuration management application service at each site shall track the following items at the site by name and identifier: a. ECS subsystems, networks, and configured system and network devices such as workstations, servers, and routers b. ECS releases and site baselines c. ECS hardware and software resources designated as configuration items d. specifications asscoiated with configuration items e. technical documentation and test materials f. scientific algorithms, including software, data and test materials (DAACs only)
			S-DPS-41400	IR1	The AITTL CI shall include access to a configuration management tool supplied by MSS.
PGS-0950#B	The PGS shall interface to maintain configuration control of all algorithms and calibration coefficients used in operational Standard Product production. Controlled information shall contain at a minimum: a. Source code including version number and author b. Benchmark test procedures, test data, and results c. Date and time of operational installation d. Compiler identification and version e. Final algorithm documentation		C-MSS-40000	A	The MSS configuration management application service at each site shall track the following items at the site by name and identifier: a. ECS subsystems, networks, and configured system and network devices such as workstations, servers, and routers b. ECS releases and site baselines c. ECS hardware and software resources designated as configuration items d. specifications asscoiated with configuration items e. technical documentation and test materials f. scientific algorithms, including software, data and test materials (DAACs only)
			S-DPS-41400	IR1	The AITTL CI shall include access to a configuration management tool supplied by MSS.
			S-DPS-41410	IR1	The AITTL CI shall include access to a problem tracking tool supplied by MSS.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0950#Ir1	The PGS shall interface to the SMC to maintain configuration control of all algorithms and calibration coefficients used in operational Standard Product production. Controlled information shall contain at a minimum: a. Source code including version number and author b. Benchmark test procedures, test data, and results c. Date and time of operational installation d. Compiler identification and version e. Final algorithm documentation	IR1: Applies to local CM capability only, not SMC.	S-DPS-41400	IR1	The AITTL CI shall include access to a configuration management tool supplied by MSS.
PGS-0960#A	The PGS shall send the DADS new or modified algorithms. This delivery shall contain the following information at a minimum: a. Source code including version number and author b. Benchmark test procedures, test data and results c. Date and time of operational installation d. Final algorithm documentation e. Calibration coefficient values	A: CERES, LIS	S-DPS-41920	A	The AITTL CI shall provide to the operations staff the capability to store a Science Software Archive Package to the Data Server.
			S-DPS-41910	A	The AITTL CI shall provide to the operations staff the capability to retrieve a copy of a specific Science Software Archive Package.
PGS-0960#B	The PGS shall send the DADS new or modified algorithms. This delivery shall contain the following information at a minimum: a. Source code including version number and author b. Benchmark test procedures, test data and results c. Date and time of operational installation d. Final algorithm documentation e. Calibration coefficient values	B: AM-1, COLOR	S-DPS-42610	IR1	The operations staff shall enter new PGEs into the PGE Database, along with their performance and resource utilization information.
			S-DPS-42620	IR1	The operations staff shall update information the PGE Database as necessary to reflect changes in performance and resource utilization resulting from a modification to a PGE.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-41100	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to display a list of Science Software Archive Packages in the Data Server.
			S-DPS-41110	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to display the metadata for a specific Science Software Archive Package.
			S-DPS-41120	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to display a list of the files that comprise a specific Science Software Archive Package.
			S-DPS-41130	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to retrieve a copy of a specified file belonging to a specific Science Software Archive Package.
			S-DPS-41140	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to add a new Science Software Archive Package to the Data Server.
			S-DPS-41150	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to add or remove a file to or from the set of files comprising a specific Science Software Archive Package.
			S-DPS-41160	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to edit the metadata for a specific Science Software Archive Package.
			S-DPS-41170	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to remove a specific Science Software Archive Package from the Data Server.
			S-DPS-41180	B	The AITTL CI shall provide to the operations staff, via a GUI, the capability to define new data types for new Products produced by an Science Software Archive Package.
			S-DPS-41190	B	The AITTL CI SSAP GUI for adding an Science Software Archive Package to the Data Server shall have the capability of accepting its inputs from a file.
			S-DPS-41200	B	The AITTL CI SSAP GUI for adding an Science Software Archive Package to the Data Server shall provide the operations staff with the ability (a) to restrict update access to the Data Server to authorized personnel and (b) to maintain a record of updates made.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-0970#A	The PGS shall provide §le access subroutines that enforce compliance with the adopted standard ECS formats.		S-DPS-21120	A	The PRONG CI shall create a Process Control File to provide information to the SDP Toolkit CI about the input data required to execute a PGE.
			S-DPS-21130	A	The PRONG CI shall create a Process Control File to provide information to the SDP Toolkit CI about the output data generated from the executing PGE.
			S-DPS-21140	A	The PRONG CI shall create a mapping of logical file handles to physical file handles in the Process Control File for the input data required to execute a PGE.
			S-DPS-21150	A	The PRONG CI shall create a mapping of logical file handles to physical file handles in the Process Control File for the output data generated from the executing PGE.
PGS-0970#B	The PGS shall provide §le access subroutines that enforce compliance with the adopted standard ECS formats.		S-DPS-21120	A	The PRONG CI shall create a Process Control File to provide information to the SDP Toolkit CI about the input data required to execute a PGE.
			S-DPS-21130	A	The PRONG CI shall create a Process Control File to provide information to the SDP Toolkit CI about the output data generated from the executing PGE.
			S-DPS-21140	A	The PRONG CI shall create a mapping of logical file handles to physical file handles in the Process Control File for the input data required to execute a PGE.
			S-DPS-21150	A	The PRONG CI shall create a mapping of logical file handles to physical file handles in the Process Control File for the output data generated from the executing PGE.
PGS-0970#Ir1	The PGS shall provide §le access subroutines that enforce compliance with the adopted standard ECS formats.	IR1: Total applicability			
PGS-0980#A	The PGS shall provide job control routines that provide all required task parameters to the Standard Product software.		S-DPS-21120	A	The PRONG CI shall create a Process Control File to provide information to the SDP Toolkit CI about the input data required to execute a PGE.
			S-DPS-21130	A	The PRONG CI shall create a Process Control File to provide information to the SDP Toolkit CI about the output data generated from the executing PGE.
			S-DPS-21140	A	The PRONG CI shall create a mapping of logical file handles to physical file handles in the Process Control File for the input data required to execute a PGE.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21150	A	The PRONG CI shall create a mapping of logical file handles to physical file handles in the Process Control File for the output data generated from the executing PGE.
PGS-0980#B	The PGS shall provide job control routines that provide all required task parameters to the Standard Product software.		S-DPS-21120	A	The PRONG CI shall create a Process Control File to provide information to the SDP Toolkit CI about the input data required to execute a PGE.
			S-DPS-21130	A	The PRONG CI shall create a Process Control File to provide information to the SDP Toolkit CI about the output data generated from the executing PGE.
			S-DPS-21140	A	The PRONG CI shall create a mapping of logical file handles to physical file handles in the Process Control File for the input data required to execute a PGE.
			S-DPS-21150	A	The PRONG CI shall create a mapping of logical file handles to physical file handles in the Process Control File for the output data generated from the executing PGE.
PGS-0980#Ir1	The PGS shall provide job control routines that provide all required task parameters to the Standard Product software.				
PGS-0990#A	The PGS shall provide error logging subroutines for use by Standard Product software in notifying the system operators of conditions requiring their attention.		S-DPS-21160	A	The PRONG CI shall create a Status Message File to be used by the SDP Toolkit CI to collect Toolkit status and error information about the execution of a PGE.
			S-DPS-21170	A	The PRONG CI shall create User Status Message Files to be used by the SDP Toolkit CI during PGE execution if requested through the data defining the characteristics of the PGE.
			S-DPS-21180	A	The PRONG CI shall allocate 1 shared memory attachment to a PGE to support access to internal memory during execution.
PGS-0990#B	The PGS shall provide error logging subroutines for use by Standard Product software in notifying the system operators of conditions requiring their attention.		S-DPS-21160	A	The PRONG CI shall create a Status Message File to be used by the SDP Toolkit CI to collect Toolkit status and error information about the execution of a PGE.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21170	A	The PRONG CI shall create User Status Message Files to be used by the SDP Toolkit CI during PGE execution if requested through the data defining the characteristics of the PGE.
			S-DPS-21180	A	The PRONG CI shall allocate 1 shared memory attachment to a PGE to support access to internal memory during execution.
PGS-0990#Ir1	The PGS shall provide error logging subroutines for use by Standard Product software in notifying the system operators of conditions requiring their attention.	IR1: Total applicability			
PGS-1000#A	The PGS shall provide error logging subroutines for use by Standard Product software in notifying users of conditions requiring their attention.		S-DPS-21160	A	The PRONG CI shall create a Status Message File to be used by the SDP Toolkit CI to collect Toolkit status and error information about the execution of a PGE.
			S-DPS-21170	A	The PRONG CI shall create User Status Message Files to be used by the SDP Toolkit CI during PGE execution if requested through the data defining the characteristics of the PGE.
			S-DPS-21180	A	The PRONG CI shall allocate 1 shared memory attachment to a PGE to support access to internal memory during execution.
PGS-1000#B	The PGS shall provide error logging subroutines for use by Standard Product software in notifying users of conditions requiring their attention.		S-DPS-21160	A	The PRONG CI shall create a Status Message File to be used by the SDP Toolkit CI to collect Toolkit status and error information about the execution of a PGE.
			S-DPS-21170	A	The PRONG CI shall create User Status Message Files to be used by the SDP Toolkit CI during PGE execution if requested through the data defining the characteristics of the PGE.
			S-DPS-21180	A	The PRONG CI shall allocate 1 shared memory attachment to a PGE to support access to internal memory during execution.
PGS-1000#Ir1	The PGS shall provide error logging subroutines for use by Standard Product software in notifying users of conditions requiring their attention.	IR1: Total applicability			

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-1010#A	The PGS shall provide mass storage allocation subroutines that provide algorithms with a means for dynamic allocation of storage for temporary files.				
PGS-1010#B	The PGS shall provide mass storage allocation subroutines that provide algorithms with a means for dynamic allocation of storage for temporary files.				
PGS-1010#Ir1	The PGS shall provide mass storage allocation subroutines that provide algorithms with a means for dynamic allocation of storage for temporary files.	IR1: Applies to staging storage only.			
PGS-1015#A	The PGS shall provide ancillary data access subroutines that provide Standard Product software access to ephemeris data (e.g., solar, lunar, and satellite ephemeris), Earth rotation data, and time and position measurement data. These subroutines shall perform operations such as: a. Interpolation b. Extrapolation c. Coordinate system conversion		S-DPS-30700	A	The PRONG CI shall provide to the SDP Toolkit, at a minimum, the following metadata with the ephemeris data files for TRMM processing: a. Time range b. Orbit number range c. Platform
PGS-1015#B	The PGS shall provide ancillary data access subroutines that provide Standard Product software access to ephemeris data (e.g., solar, lunar, and satellite ephemeris), Earth rotation data, and time and position measurement data. These subroutines shall perform operations such as: a. Interpolation b. Extrapolation c. Coordinate system conversion		S-DPS-30700	A	The PRONG CI shall provide to the SDP Toolkit, at a minimum, the following metadata with the ephemeris data files for TRMM processing: a. Time range b. Orbit number range c. Platform
			S-DPS-30710	B	The PRONG CI shall provide to the SDP Toolkit, at a minimum, the following metadata with the ephemeris data files for EOS-AM processing: a) time range b) orbit number range c) platform

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-1015#Ir1	The PGS shall provide ancillary data access subroutines that provide Standard Product software access to ephemeris data (e.g., solar, lunar, and satellite ephemeris), Earth rotation data, and time and position measurement data. These subroutines shall perform operations such as: a. Interpolation b. Extrapolation c. Coordinate system conversion	IR1: Total applicability			
PGS-1020#A	The PGS shall provide mathematical libraries including: a. Linear algebra and analysis (e.g., LINPAC, IMSL) b. Statistical calculations (e.g., SAS, SPSS)				
PGS-1020#B	The PGS shall provide mathematical libraries including: a. Linear algebra and analysis (e.g., LINPAC, IMSL) b. Statistical calculations (e.g., SAS, SPSS)				
PGS-1020#Ir1	The PGS shall provide mathematical libraries including: a. Linear algebra and analysis (e.g., LINPAC, IMSL) b. Statistical calculations (e.g., SAS, SPSS)	IR1: Total applicability			
PGS-1025#A	The PGS shall provide a Science Processing Library containing routines such as: a. Image processing routines b. Data visualization routines c. Graphics routines		S-DSS-03440	A	The SDSRV CI shall interface with the STMGT CI to provide storage for Science Software Archive Packages.
			S-DSS-03712	A	The SDSRV CI shall interface with the STMGT CI to provide storage for Research results (articles, algorithms, data sets, software).

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-INS-00180	A	The INGST CI shall interactively accept Network Ingest Requests from authorized science users for electronic network ingest of a collection of Data from a location accessible via the ESN. The collection of Data shall describe one or more Data Granules.
			S-INS-00190	A	The INGST CI shall check the Network Ingest Request to verify that the date/time prior to which the data will remain available is a valid date/time in a Network Ingest Request entered interactively by a science user.
			S-INS-00200	A	The INGST CI shall allow a science user to specify the list of granule files in an interactive Network Ingest Request based on a displayed list of existing files stored on magnetic disk.
			S-INS-00205	A	The INGST CI shall determine the External Data Provider for a Network Ingest Request entered interactively by a science user.
			S-INS-00207	A	The INGST CI shall automatically determine the data volume for each file in the list of granule files for an interactively entered Network Ingest Request.
			S-INS-00208	A	The INGST CI shall authenticate that the interactive science user entering a Network Ingest Request is authorized to request ingest of data.
			S-INS-00209	A	The INGST CI shall report to the Error Log an unauthorized attempt to interactively request ingest of data.
			S-INS-00220	A	The INGST CI shall report status to the interactive submitter of a Network Ingest Request for the following: a. File transfer failure b. File size discrepancy c. Invalid Data Type Identifier d. Missing required metadata e. Metadata parameters out of range f. Data conversion failure g. Failure to archive data h. Inability to transfer data within the specified time window i. Unauthorized science user j. Missing required request information k. Successful archive of the data
			S-INS-00408	A	For each data granule specified in an Ingest Request the INGST CI shall determine by means of an Advertisement the appropriate SDSRV CI/DDSRV CI in which to store the data granule.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-INS-00409	A	The INGST CI shall provide the capability to request storage of a data granule by means of a Data Insert Request to the SDSRV CI/DDSRV CI associated with the type of the data granule.
			S-DSS-03450	A	The SDSRV CI shall provide storage for Metadata associated with Science Software Archive Packages.
PGS-1025#B	The PGS shall provide a Science Processing Library containing routines such as: a. Image processing routines b. Data visualization routines c. Graphics routines		S-DSS-03440	A	The SDSRV CI shall interface with the STMGT CI to provide storage for Science Software Archive Packages.
			S-DSS-03712	A	The SDSRV CI shall interface with the STMGT CI to provide storage for Research results (articles, algorithms, data sets, software).
			S-INS-00180	A	The INGST CI shall interactively accept Network Ingest Requests from authorized science users for electronic network ingest of a collection of Data from a location accessible via the ESN. The collection of Data shall describe one or more Data Granules.
			S-INS-00190	A	The INGST CI shall check the Network Ingest Request to verify that the date/time prior to which the data will remain available is a valid date/time in a Network Ingest Request entered interactively by a science user.
			S-INS-00200	A	The INGST CI shall allow a science user to specify the list of granule files in an interactive Network Ingest Request based on a displayed list of existing files stored on magnetic disk.
			S-INS-00205	A	The INGST CI shall determine the External Data Provider for a Network Ingest Request entered interactively by a science user.
			S-INS-00207	A	The INGST CI shall automatically determine the data volume for each file in the list of granule files for an interactively entered Network Ingest Request.
			S-INS-00208	A	The INGST CI shall authenticate that the interactive science user entering a Network Ingest Request is authorized to request ingest of data.
			S-INS-00209	A	The INGST CI shall report to the Error Log an unauthorized attempt to interactively request ingest of data.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-INS-00220	A	The INGST CI shall report status to the interactive submitter of a Network Ingest Request for the following: a. File transfer failure b. File size discrepancy c. Invalid Data Type Identifier d. Missing required metadata e. Metadata parameters out of range f. Data conversion failure g. Failure to archive data h. Inability to transfer data within the specified time window i. Unauthorized science user j. Missing required request information k. Successful archive of the data
			S-INS-00408	A	For each data granule specified in an Ingest Request the INGST CI shall determine by means of an Advertisement the appropriate SDSRV CI/DDSRV CI in which to store the data granule.
			S-INS-00409	A	The INGST CI shall provide the capability to request storage of a data granule by means of a Data Insert Request to the SDSRV CI/DDSRV CI associated with the type of the data granule.
			S-DSS-03450	A	The SDSRV CI shall provide storage for Metadata associated with Science Software Archive Packages.
			S-DSS-03700	B	The SDSRV CI shall interface with the STMGT CI to provide storage for special Data Products.
			S-DSS-03710	B	The SDSRV CI shall provide storage for Metadata associated with special Data Products.
PGS-1030#A	The PGS shall provide a toolkit to the SCF containing versions of the routines specified in requirements PGS-0970 to PGS-1020.				
PGS-1030#B	The PGS shall provide a toolkit to the SCF containing versions of the routines specified in requirements PGS-0970 to PGS-1020.				
PGS-1030#Ir1	The PGS shall provide a toolkit to the SCF containing versions of the routines specified in requirements PGS-0970 to PGS-1020.	IR1: External interface requirement SCF-0060.			

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-1050#A	The PGS shall provide the capability to perform both automatic and manual QA of generated products.		S-DPS-21460	A	The PRONG CI shall use a SDP Toolkit API to associate Q/A-Specific Metadata with each Granule of a Data Product.
			S-DPS-21500	A	The PRONG CI shall use algorithms provided by the scientists to perform automated QA on generated Data Products.
			S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.
			S-DPS-21790	A	The operations staff shall have the capability of viewing a Data Product.
			S-DPS-21800	A	The operations staff shall have the capability of viewing the algorithms used to generate a Data Product.
			S-DPS-21810	A	The operations staff shall have the capability of viewing the ECS Data Products used to generate a Data Product. .
			S-DPS-21820	A	The operations staff shall have the capability of viewing the Calibration Coefficient Data used to generate a Data Product.
			S-DPS-21830	A	The operations staff shall have the capability of viewing the Ancillary Data Products used to generate a Data Product.
			S-DPS-21840	A	The operations staff shall have the capability of viewing the Status Information files associated with the generated Data Product.
			S-DPS-21850	A	The operations staff shall have the capability of viewing all metadata associated with the generation of a Data Product.
			S-DPS-22020	A	The PRONG CI shall provide a user interface to support the manual Q/A of Data Products.
			S-DPS-22030	A	The PRONG CI shall provide access to data visualization tools to support the manual Q/A of Data Products.
			S-DPS-22040	A	The PRONG CI shall provide a user interface to support the update of the Q/A metadata of a Data Product.
			S-DPS-22050	A	The PRONG CI shall provide an interface to support the visual display of a Data Product.
			S-DPS-22060	A	The PRONG CI shall provide an interface to support the visual display of the algorithms used to generate a Data Product.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-22070	A	The PRONG CI shall provide an interface to support the visual display of the ECS Data Products used to generate a Data Product.
			S-DPS-22080	A	The PRONG CI shall provide an interface to support the visual display of the Calibration Coefficient Data used to generate a Data Product.
			S-DPS-22090	A	The PRONG CI shall provide an interface to support the visual display of the Ancillary Data Products used to generate a Data Product.
			S-DPS-22100	A	The PRONG CI shall provide an interface to support the visual display of the Status Information files associated with the generated Data Product.
			S-DPS-22110	A	The PRONG CI shall provide an interface to support the visual display of all metadata associated with the generation of a Data Product.
			S-DPS-80010	A	The AQAHW CI shall provide for hardware resources to support DAAC operations staff performing routine QA of Product data.
PGS-1050#B	The PGS shall provide the capability to perform both automatic and manual QA of generated products.		S-DPS-21460	A	The PRONG CI shall use a SDP Toolkit API to associate Q/A-Specific Metadata with each Granule of a Data Product.
			S-DPS-21500	A	The PRONG CI shall use algorithms provided by the scientists to perform automated QA on generated Data Products.
			S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.
			S-DPS-21790	A	The operations staff shall have the capability of viewing a Data Product.
			S-DPS-21800	A	The operations staff shall have the capability of viewing the algorithms used to generate a Data Product.
			S-DPS-21810	A	The operations staff shall have the capability of viewing the ECS Data Products used to generate a Data Product. .
			S-DPS-21820	A	The operations staff shall have the capability of viewing the Calibration Coefficient Data used to generate a Data Product.
			S-DPS-21830	A	The operations staff shall have the capability of viewing the Ancillary Data Products used to generate a Data Product.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21840	A	The operations staff shall have the capability of viewing the Status Information files associated with the generated Data Product.
			S-DPS-21850	A	The operations staff shall have the capability of viewing all metadata associated with the generation of a Data Product.
			S-DPS-22020	A	The PRONG CI shall provide a user interface to support the manual Q/A of Data Products.
			S-DPS-22030	A	The PRONG CI shall provide access to data visualization tools to support the manual Q/A of Data Products.
			S-DPS-22040	A	The PRONG CI shall provide a user interface to support the update of the Q/A metadata of a Data Product.
			S-DPS-22050	A	The PRONG CI shall provide an interface to support the visual display of a Data Product.
			S-DPS-22060	A	The PRONG CI shall provide an interface to support the visual display of the algorithms used to generate a Data Product.
			S-DPS-22070	A	The PRONG CI shall provide an interface to support the visual display of the ECS Data Products used to generate a Data Product.
			S-DPS-22080	A	The PRONG CI shall provide an interface to support the visual display of the Calibration Coefficient Data used to generate a Data Product.
			S-DPS-22090	A	The PRONG CI shall provide an interface to support the visual display of the Ancillary Data Products used to generate a Data Product.
			S-DPS-22100	A	The PRONG CI shall provide an interface to support the visual display of the Status Information files associated with the generated Data Product.
			S-DPS-22110	A	The PRONG CI shall provide an interface to support the visual display of all metadata associated with the generation of a Data Product.
			S-DPS-80010	A	The AQAHW CI shall provide for hardware resources to support DAAC operations staff performing routine QA of Product data.
PGS-1060#A	The PGS shall have the capability to perform automatic QA of generated products utilizing algorithms provided by the scientists.		S-DPS-21460	A	The PRONG CI shall use a SDP Toolkit API to associate Q/A-Specific Metadata with each Granule of a Data Product.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21500	A	The PRONG CI shall use algorithms provided by the scientists to perform automated QA on generated Data Products.
			S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.
			S-DPS-80010	A	The AQAHW CI shall provide for hardware resources to support DAAC operations staff performing routine QA of Product data.
PGS-1060#B	The PGS shall have the capability to perform automatic QA of generated products utilizing algorithms provided by the scientists.		S-DPS-21460	A	The PRONG CI shall use a SDP Toolkit API to associate Q/A-Specific Metadata with each Granule of a Data Product.
			S-DPS-21500	A	The PRONG CI shall use algorithms provided by the scientists to perform automated QA on generated Data Products.
			S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.
			S-DPS-80010	A	The AQAHW CI shall provide for hardware resources to support DAAC operations staff performing routine QA of Product data.
PGS-1080#A	The PGS shall have the capability to provide an inventory and review copy of generated products to the data product quality staff before the product is sent to the DADS for storage.		S-DPS-21790	A	The operations staff shall have the capability of viewing a Data Product.
			S-DPS-22020	A	The PRONG CI shall provide a user interface to support the manual Q/A of Data Products.
			S-DPS-22030	A	The PRONG CI shall provide access to data visualization tools to support the manual Q/A of Data Products.
			S-DPS-22050	A	The PRONG CI shall provide an interface to support the visual display of a Data Product.
			S-DPS-80010	A	The AQAHW CI shall provide for hardware resources to support DAAC operations staff performing routine QA of Product data.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-1080#B	The PGS shall have the capability to provide an inventory and review copy of generated products to the data product quality staff before the product is sent to the DADS for storage.		S-DPS-21790	A	The operations staff shall have the capability of viewing a Data Product.
			S-DPS-22020	A	The PRONG CI shall provide a user interface to support the manual Q/A of Data Products.
			S-DPS-22030	A	The PRONG CI shall provide access to data visualization tools to support the manual Q/A of Data Products.
			S-DPS-22050	A	The PRONG CI shall provide an interface to support the visual display of a Data Product.
			S-DPS-80010	A	The AQAHW CI shall provide for hardware resources to support DAAC operations staff performing routine QA of Product data.
PGS-1090#A	The PGS shall have the capability to provide the data product quality staff with the algorithms, calibration coefficient tables, input data sets, or other information related to product processing for the purpose of reviewing and analyzing the quality of production.		S-DPS-21460	A	The PRONG CI shall use a SDP Toolkit API to associate Q/A-Specific Metadata with each Granule of a Data Product.
			S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.
			S-DPS-21800	A	The operations staff shall have the capability of viewing the algorithms used to generate a Data Product.
			S-DPS-21810	A	The operations staff shall have the capability of viewing the ECS Data Products used to generate a Data Product. .
			S-DPS-21820	A	The operations staff shall have the capability of viewing the Calibration Coefficient Data used to generate a Data Product.
			S-DPS-21830	A	The operations staff shall have the capability of viewing the Ancillary Data Products used to generate a Data Product.
			S-DPS-21840	A	The operations staff shall have the capability of viewing the Status Information files associated with the generated Data Product.
			S-DPS-21850	A	The operations staff shall have the capability of viewing all metadata associated with the generation of a Data Product.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-22020	A	The PRONG CI shall provide a user interface to support the manual Q/A of Data Products.
			S-DPS-22030	A	The PRONG CI shall provide access to data visualization tools to support the manual Q/A of Data Products.
			S-DPS-22040	A	The PRONG CI shall provide a user interface to support the update of the Q/A metadata of a Data Product.
			S-DPS-22060	A	The PRONG CI shall provide an interface to support the visual display of the algorithms used to generate a Data Product.
			S-DPS-22070	A	The PRONG CI shall provide an interface to support the visual display of the ECS Data Products used to generate a Data Product.
			S-DPS-22080	A	The PRONG CI shall provide an interface to support the visual display of the Calibration Coefficient Data used to generate a Data Product.
			S-DPS-22090	A	The PRONG CI shall provide an interface to support the visual display of the Ancillary Data Products used to generate a Data Product.
			S-DPS-22100	A	The PRONG CI shall provide an interface to support the visual display of the Status Information files associated with the generated Data Product.
			S-DPS-22110	A	The PRONG CI shall provide an interface to support the visual display of all metadata associated with the generation of a Data Product.
			S-DPS-80010	A	The AQAHW CI shall provide for hardware resources to support DAAC operations staff performing routine QA of Product data.
PGS-1090#B	The PGS shall have the capability to provide the data product quality staff with the algorithms, calibration coefficient tables, input data sets, or other information related to product processing for the purpose of reviewing and analyzing the quality of production.		S-DPS-21460	A	The PRONG CI shall use a SDP Toolkit API to associate Q/A-Specific Metadata with each Granule of a Data Product.
			S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.
			S-DPS-21800	A	The operations staff shall have the capability of viewing the algorithms used to generate a Data Product.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21810	A	The operations staff shall have the capability of viewing the ECS Data Products used to generate a Data Product. .
			S-DPS-21820	A	The operations staff shall have the capability of viewing the Calibration Coefficient Data used to generate a Data Product.
			S-DPS-21830	A	The operations staff shall have the capability of viewing the Ancillary Data Products used to generate a Data Product.
			S-DPS-21840	A	The operations staff shall have the capability of viewing the Status Information files associated with the generated Data Product.
			S-DPS-21850	A	The operations staff shall have the capability of viewing all metadata associated with the generation of a Data Product.
			S-DPS-22020	A	The PRONG CI shall provide a user interface to support the manual Q/A of Data Products.
			S-DPS-22030	A	The PRONG CI shall provide access to data visualization tools to support the manual Q/A of Data Products.
			S-DPS-22040	A	The PRONG CI shall provide a user interface to support the update of the Q/A metadata of a Data Product.
			S-DPS-22060	A	The PRONG CI shall provide an interface to support the visual display of the algorithms used to generate a Data Product.
			S-DPS-22070	A	The PRONG CI shall provide an interface to support the visual display of the ECS Data Products used to generate a Data Product.
			S-DPS-22080	A	The PRONG CI shall provide an interface to support the visual display of the Calibration Coefficient Data used to generate a Data Product.
			S-DPS-22090	A	The PRONG CI shall provide an interface to support the visual display of the Ancillary Data Products used to generate a Data Product.
			S-DPS-22100	A	The PRONG CI shall provide an interface to support the visual display of the Status Information files associated with the generated Data Product.
			S-DPS-22110	A	The PRONG CI shall provide an interface to support the visual display of all metadata associated with the generation of a Data Product.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-80010	A	The AQAHW CI shall provide for hardware resources to support DAAC operations staff performing routine QA of Product data.
PGS-1100#A	The PGS shall have the capability to accept product quality data input.	This requirement supports manual and automatic QA.	S-PLS-00830	A	The PLANG CI shall send Data Processing Requests (specified in an Active Plan) to a processing resource that can perform the processing, if the following applies: a. All required input data (including metadata) is available b. Its input data has passed quality assurance (if applicable)
			S-DPS-22020	A	The PRONG CI shall provide a user interface to support the manual Q/A of Data Products.
			S-DPS-22030	A	The PRONG CI shall provide access to data visualization tools to support the manual Q/A of Data Products.
			S-DPS-22040	A	The PRONG CI shall provide a user interface to support the update of the Q/A metadata of a Data Product.
			S-DPS-80010	A	The AQAHW CI shall provide for hardware resources to support DAAC operations staff performing routine QA of Product data.
			S-DPS-30610	A	The PRONG CI shall process the TRMM spacecraft ancillary data to assess the quality of onboard attitude data to detect and note in metadata the following conditions: a. missing data b. erroneous data (i.e. invalid Euler angle, invalid Euler angle rate)
PGS-1100#B	The PGS shall have the capability to accept product quality data input.	This requirement supports manual and automatic QA.	S-PLS-00830	A	The PLANG CI shall send Data Processing Requests (specified in an Active Plan) to a processing resource that can perform the processing, if the following applies: a. All required input data (including metadata) is available b. Its input data has passed quality assurance (if applicable)
			S-DPS-22020	A	The PRONG CI shall provide a user interface to support the manual Q/A of Data Products.
			S-DPS-22030	A	The PRONG CI shall provide access to data visualization tools to support the manual Q/A of Data Products.
			S-DPS-22040	A	The PRONG CI shall provide a user interface to support the update of the Q/A metadata of a Data Product.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-80010	A	The AQAHW CI shall provide for hardware resources to support DAAC operations staff performing routine QA of Product data.
			S-DPS-30610	A	The PRONG CI shall process the TRMM spacecraft ancillary data to assess the quality of onboard attitude data to detect and note in metadata the following conditions: a. missing data b. erroneous data (i.e. invalid Euler angle, invalid Euler angle rate)
			S-DPS-30300	B	The PRONG CI shall process the EOS-AM spacecraft ancillary data to assess the quality of onboard orbit data to detect and note in metadata the following conditions: a. missing data b. erroneous data (i.e. if distance from origin deviates greatly from a neighboring set of points or if magnitude of velocity deviates greatly from the neighboring set of velocities) excluding data that reflects orbit adjust maneuvers
			S-DPS-30320	B	The PRONG CI shall report on the quality of onboard orbit data, noting: a) the number of missing data are more than a specified limit value over a specified time interval b) the number of contiguous missing data are more than a specified value
			S-DPS-30600	B	The PRONG CI shall process the EOS-AM spacecraft ancillary data to assess the quality of onboard attitude data contained in the EOS-AM spacecraft ancillary data to detect and note in metadata the folloowing conditions: a) missing data b) erroneous data (i.e. invalid Euler angle, invalid Euler angle rate).
PGS-1110#A	The PGS shall have the capability to associate data quality with a generated product.		S-DPS-21460	A	The PRONG CI shall use a SDP Toolkit API to associate Q/A-Specific Metadata with each Granule of a Data Product.
			S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.
			S-DPS-80010	A	The AQAHW CI shall provide for hardware resources to support DAAC operations staff performing routine QA of Product data.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-1110#B	The PGS shall have the capability to associate data quality with a generated product.		S-DPS-21460	A	The PRONG CI shall use a SDP Toolkit API to associate Q/A-Specific Metadata with each Granule of a Data Product.
			S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.
			S-DPS-80010	A	The AQAHW CI shall provide for hardware resources to support DAAC operations staff performing routine QA of Product data.
PGS-1120#A	The PGS shall send the DADS updated metadata provided by the data product quality staff relating to product QA review. This QA review metadata shall contain the following information at a minimum. a. Product ID b. QA Approval field c. Other metadata		S-DPS-20860	A	The PRONG CI shall destage ECS Data Products to the SDSRV CI.
			S-DPS-21460	A	The PRONG CI shall use a SDP Toolkit API to associate Q/A-Specific Metadata with each Granule of a Data Product.
			S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.
			S-DPS-22020	A	The PRONG CI shall provide a user interface to support the manual Q/A of Data Products.
			S-DPS-22030	A	The PRONG CI shall provide access to data visualization tools to support the manual Q/A of Data Products.
			S-DPS-22040	A	The PRONG CI shall provide a user interface to support the update of the Q/A metadata of a Data Product.
PGS-1120#B	The PGS shall send the DADS updated metadata provided by the data product quality staff relating to product QA review. This QA review metadata shall contain the following information at a minimum. a. Product ID b. QA Approval field c. Other metadata		S-DPS-20860	A	The PRONG CI shall destage ECS Data Products to the SDSRV CI.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21460	A	The PRONG CI shall use a SDP Toolkit API to associate Q/A-Specific Metadata with each Granule of a Data Product.
			S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.
			S-DPS-22020	A	The PRONG CI shall provide a user interface to support the manual Q/A of Data Products.
			S-DPS-22030	A	The PRONG CI shall provide access to data visualization tools to support the manual Q/A of Data Products.
			S-DPS-22040	A	The PRONG CI shall provide a user interface to support the update of the Q/A metadata of a Data Product.
PGS-1130#A	The PGS shall receive product QA from the SCF which shall describe the results of the scientists product quality review at an SCF. Product QA shall contain the following information at a minimum: a. Identification of product b. QA results c. Product storage and processing instructions	A: CERES, LIS Metadata = Product ID, QA results, Product Storage and Processing Instructions.	S-DSS-04590	A	The SDSRV CI shall provide services to modify the existing Inventory
			S-CLS-01640	A	The DESKT CI shall provide QA metedata updates to the SDSRV CI.
			S-DSS-04595	A	The SDSRV CI shall be capable of receiving QA metadata updates from the DESKT CI.
			S-DSS-04596	A	The SDSRV shall provide the capability to allow DAAC operations personnel to approve the QA metadata update.
			S-CLS-01630	A	The DESKT CI shall provide a GUI to allow SCFs to request a QA metadata update with update data.
PGS-1130#B	The PGS shall receive product QA from the SCF which shall describe the results of the scientists product quality review at an SCF. Product QA shall contain the following information at a minimum: a. Identification of product b. QA results c. Product storage and processing instructions		S-DSS-04590	A	The SDSRV CI shall provide services to modify the existing Inventory

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-PLS-00875	A	The PLANG CI shall receive Subscription Notices indicating availability of subscribed data.
			S-CLS-01640	A	The DESKT CI shall provide QA metedata updates to the SDSRV CI.
			S-DSS-04595	A	The SDSRV CI shall be capable of receiving QA metadata updates from the DESKT CI.
			S-DSS-04596	A	The SDSRV shall provide the capability to allow DAAC operations personnel to approve the QA metadata update.
			S-CLS-01630	A	The DESKT CI shall provide a GUI to allow SCFs to request a QA metadata update with update data.
PGS-1140#A	The PGS shall have the capability to provide the data product quality staff with the Product QA data from the SCF.	A: CERES, LIS	S-DPS-22110	A	The PRONG CI shall provide an interface to support the visual display of all metadata associated with the generation of a Data Product.
PGS-1140#B	The PGS shall have the capability to provide the data product quality staff with the Product QA data from the SCF.		S-DPS-22110	A	The PRONG CI shall provide an interface to support the visual display of all metadata associated with the generation of a Data Product.
PGS-1150#A	The PGS shall have the capability to accept the identification of products that are not to be stored in the DADS due to inferior quality or other reasons. The reason for all such actions shall also be specified.		S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.
			S-DPS-21520	A	The PRONG CI shall coordinate the deletion of the outputs of a PGE which were temporarily stored in the SDSRV CI.
			S-DPS-22120	A	The PRONG CI shall support a capability to alert the operations staff of a Data Product which is being stored temporarily in the Data Server.
			S-DPS-22130	A	The PRONG CI shall support a capability to alert the operations staff of a Data Product which requires quality assurance activities.
PGS-1150#B	The PGS shall have the capability to accept the identification of products that are not to be stored in the DADS due to inferior quality or other reasons. The reason for all such actions shall also be specified.		S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-21520	A	The PRONG CI shall coordinate the deletion of the outputs of a PGE which were temporarily stored in the SDSRV CI.
			S-DPS-22120	A	The PRONG CI shall support a capability to alert the operations staff of a Data Product which is being stored temporarily in the Data Server.
			S-DPS-22130	A	The PRONG CI shall support a capability to alert the operations staff of a Data Product which requires quality assurance activities.
PGS-1160#B	The PGS shall have the capability to accept from the product quality staff commands to suspend specified production processing due to inferior quality or other reasons in line with SMC guidelines. The reasons for all such actions shall also be specified.		S-DPS-21730	B	The operations staff shall have the capability to suspend the processing of a Data Processing Request.
PGS-1170#B	The PGS shall have the capability to identify data products awaiting QA that have not been reviewed within the amount of time allocated for QA.		S-PLS-00830	A	The PLANG CI shall send Data Processing Requests (specified in an Active Plan) to a processing resource that can perform the processing, if the following applies: a. All required input data (including metadata) is available b. Its input data has passed quality assurance (if applicable)
			S-PLS-00827	A | B	The PLANG CI shall update the quality assurance status of input data (if applicable) to reflect an expired QA timeout period if its quality assurance information has not been received within specified time periods.
PGS-1175#B	The PGS shall maintain a list of products requiring QA by SCF or the PGS.		S-PLS-00825	A | B	The PLANG CI shall have the capability to identify all available input data (as specified in the Active Plan) that is currently awaiting quality assurance information.
PGS-1180#B	The PGS shall have the capability to update the processing status of a given product as a result of a QA timeout.		S-PLS-00827	A | B	The PLANG CI shall update the quality assurance status of input data (if applicable) to reflect an expired QA timeout period if its quality assurance information has not been received within specified time periods.
PGS-1190#A	The PGS shall have the capability to log the identification of all non-stored products or suspended processing directed by the data product quality staff to support the maintenance of performance statistics.		S-PLS-01270	A	The PLANG CI shall support the generation of Data Processing Request Status reports (upon request) that will provide Data Processing Request information based on the report generation parameters and the time period specified.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-1190#B	The PGS shall have the capability to log the identification of all non-stored products or suspended processing directed by the data product quality staff to support the maintenance of performance statistics.		S-PLS-01270	A	The PLANG CI shall support the generation of Data Processing Request Status reports (upon request) that will provide Data Processing Request information based on the report generation parameters and the time period specified.
PGS-1200#A	The PGS shall have the capability to generate a data quality assessment report including a description of the quality of each processed product as well as the quality of each of the products input data sets.		S-DPS-21460	A	The PRONG CI shall use a SDP Toolkit API to associate Q/A-Specific Metadata with each Granule of a Data Product.
			S-DPS-21490	A	The PRONG CI shall record the Q/A-Specific Metadata of each input Data Product as part of the Q/A-Specific Metadata of the Granule of a Data Product.
			S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.
PGS-1200#B	The PGS shall have the capability to generate a data quality assessment report including a description of the quality of each processed product as well as the quality of each of the products input data sets.		S-DPS-21460	A	The PRONG CI shall use a SDP Toolkit API to associate Q/A-Specific Metadata with each Granule of a Data Product.
			S-DPS-21490	A	The PRONG CI shall record the Q/A-Specific Metadata of each input Data Product as part of the Q/A-Specific Metadata of the Granule of a Data Product.
			S-DPS-21510	A	The PRONG CI shall support the capability to update Q/A metadata as required by the execution of a PGE performing automated Q/A.
PGS-1210#A	The PGS shall coordinate the disposition of PGS data stored temporarily in the DADS.		S-DPS-20850	A	The PRONG CI shall destage Intermediate Data Products to the SDSRV CI.
			S-DPS-21520	A	The PRONG CI shall coordinate the deletion of the outputs of a PGE which were temporarily stored in the SDSRV CI.
			S-DPS-21540	A	The PRONG CI shall destage all output data generated by a PGE to the SDSRV CI. (SEE Data Staging and Destaging Reqs for more details).

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-1210#B	The PGS shall coordinate the disposition of PGS data stored temporarily in the DADS.		S-DPS-20850	A	The PRONG CI shall destage Intermediate Data Products to the SDSRV CI.
			S-DPS-21520	A	The PRONG CI shall coordinate the deletion of the outputs of a PGE which were temporarily stored in the SDSRV CI.
			S-DPS-21540	A	The PRONG CI shall destage all output data generated by a PGE to the SDSRV CI. (SEE Data Staging and Destaging Reqs for more details).
PGS-1220#A	The PGS shall have the capability to receive GFE databases and associated tools, including COTS and public domain databases, and maintain them as required as inputs to product generation: Example databases are: a. Digital terrain map databases b. Land/sea databases c. Climatology databases d. Digital political map databases		S-DPS-31620	A	The PRONG CI shall be able to stage the following GFE static data sets required for PGE execution for access by the SDP Toolkit: a. Digital terrain map data sets b. Land/Sea data sets c. Digital political map data sets
PGS-1220#B	The PGS shall have the capability to receive GFE databases and associated tools, TS and public domain databases, and maintain them as required as inputs to product generation: Example databases are: a. Digital terrain map databases b. Land/sea databases c. Climatology databases d. Digital political map databases		S-DPS-31620	A	The PRONG CI shall be able to stage the following GFE static data sets required for PGE execution for access by the SDP Toolkit: a. Digital terrain map data sets b. Land/Sea data sets c. Digital political map data sets
PGS-1220#Ir1	The PGS shall have the capability to receive GFE databases and associated tools, including COTS and public domain databases, and maintain them as required as inputs to product generation: Example databases are: a. Digital terrain map databases b. Land/sea databases c. Climatology databases d. Digital political map databases	IR1: Operations support - manual - M&O procedures.			

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-1230#B	The PGS shall accept special data sets from the DADS. Received information shall contain at a minimum: a. Product identification b. Special data set c. Metadata required for processing d. Current date and time e. DADS identification	B: SCF non-standard data sets	S-DPS-20810	A	The PRONG CI shall accept Special Data Products from the SDSRV CI.
			S-DPS-20820	A	The PRONG CI shall accept Ancillary Data Products from the SDSRV CI.
PGS-1240#A	The PGS shall send the generated Level 1 to Level 4 Standard Products to the DADS. These products shall contain the following information at a minimum: a. Product identification b. L1-L4 data set c. Product processing priority d. Current date and time e. Associated metadata	A: TRMM	S-DPS-20860	A	The PRONG CI shall destage ECS Data Products to the SDSRV CI.
			S-DPS-60612	A	The SPRHW CI platforms shall have provision for interfacing with Data Server.
PGS-1240#B	The PGS shall send the generated Level 1 to Level 4 Standard Products to the DADS. These products shall contain the following information at a minimum: a. Product identification b. L1-L4 data set c. Product processing priority d. Current date and time e. Associated metadata	B: AM-1, COLOR	S-DPS-20860	A	The PRONG CI shall destage ECS Data Products to the SDSRV CI.
			S-DPS-60612	A	The SPRHW CI platforms shall have provision for interfacing with Data Server.
PGS-1250#A	The PGS shall send the DADS the calibrated ancillary data.	AM-1, Color	S-DPS-20860	A	The PRONG CI shall destage ECS Data Products to the SDSRV CI.
PGS-1250#B	The PGS shall send the DADS the calibrated ancillary data.	AM-1, Color	S-DPS-20860	A	The PRONG CI shall destage ECS Data Products to the SDSRV CI.
			S-DPS-60612	A	The SPRHW CI platforms shall have provision for interfacing with Data Server.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-1270#A	The PGS design and implementation shall have the flexibility to accommodate PGS expansion up to a factor of 3 in the processing capacity with no changes to the processing design, and up to a factor of 10 without major changes to the processing design. Such expansion in capacity or capability shall be transparent to existing algorithms or product specifications. This requirement shall apply to the system at all phases of contract performance, including the final system which accommodates the product growth specified in Appendix C, as well as the at-launch system.		S-PLS-01600	A	The PLANG CI design and implementation shall have the flexibility to accommodate Planning expansion up to a factor of 3 in its capacity with no changes to its design, and up to a factor of 10 without major changes to its design. Such expansion in capacity or capability shall be transparent to existing algorithms or product specifications.
			S-DPS-20040	A	The PRONG CI design and implementation shall have the flexibility to accomodate Processing expansion up to a factor of 3 in its capacity with no changes to the design, and up to a factor of 10 without major changes to its design. Such expansion in capacity or capability shall be transparent to existing algorithms or product specifications.
			S-DPS-60135	A	The SPRHW CI design and implementation shall have the flexibility to accommodate Science Processing expansion up to a factor of 3 in its capacity with no changes in its design and up to a factor of 10 without major changes to its design.
			S-DPS-70050	A	The Algorithm Integration and Test HWCI design and implementation shall have the flexibility to accommodate Algorithm Integration and Test expansion up to a factor of 3 in its capacity with no changes in its design and up to a factor of 10 without major changes to its design.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-1270#B	The PGS design and implementation shall have the flexibility to accommodate PGS expansion up to a factor of 3 in the processing capacity with no changes to the processing design, and up to a factor of 10 without major changes to the processing design. Such expansion in capacity or capability shall be transparent to existing algorithms or product specifications. This requirement shall apply to the system at all phases of contract performance, including the final system which accommodates the product growth specified in Appendix C, as well as the at-launch system.		S-PLS-01600	A	The PLANG CI design and implementation shall have the flexibility to accommodate Planning expansion up to a factor of 3 in its capacity with no changes to its design, and up to a factor of 10 without major changes to its design. Such expansion in capacity or capability shall be transparent to existing algorithms or product specifications.
			S-DPS-20040	A	The PRONG CI design and implementation shall have the flexibility to accomodate Processing expansion up to a factor of 3 in its capacity with no changes to the design, and up to a factor of 10 without major changes to its design. Such expansion in capacity or capability shall be transparent to existing algorithms or product specifications.
			S-DPS-60135	A	The SPRHW CI design and implementation shall have the flexibility to accommodate Science Processing expansion up to a factor of 3 in its capacity with no changes in its design and up to a factor of 10 without major changes to its design.
			S-DPS-70050	A	The Algorithm Integration and Test HWCI design and implementation shall have the flexibility to accommodate Algorithm Integration and Test expansion up to a factor of 3 in its capacity with no changes in its design and up to a factor of 10 without major changes to its design.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-1300#A	Each PGS shall provide a processing capacity four times the size necessary to process all EOS science data for which it is responsible, including interdisciplinary investigator processing. It shall be possible to effectively utilize the entire reprocessing capacity at each site on computers with similar architectural design (e.g., parallel processors), for a single algorithm or any mix of algorithms normally run at that site. The four times processing capacity accounts for: a. 1 times to allow for normal processing demands b. 2 times to allow for reprocessing demands c. 1 times to allow for algorithm integration and test demands, production of prototype products, ad hoc processing for "dynamic browse" or new search and access techniques developed by science users, and additional loads due to spacecraft overlap.	RQMT will be phased so that processing capacity will be provided following 2 years after MSN launch.	S-DPS-60230	A	The SPRHW CI shall provide a phased capacity to support: a. for pre-launch AI&T at launch minus 2 years: 0.3 X, where X is defined as the at-launch processing estimate b. for pre-launch AI&T and System I&T at-launch minus 1 year: 1.2 X, where X is defined as the at-launch processing estimate c. for post-launch AIT, standard processing, and reprocessing, starting at launch plus 1 year: 2.2 X, where X is defined as the standard processing estimate for that period d. for post-launch AIT, standard processing, and reprocessing, starting at launch plus 2 years: 4.2 X, where X is defined as the standard processing estimate for that period.
			S-DPS-60240	A	The SPRHW CI shall support a total processing requirement as derived from Table E-1 of Appendix E of the current version of 304-CD-002 for Release A and Appendix E of the current version of 304-CD-005 for Release B.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-1300#B	Each PGS shall provide a processing capacity four times the size necessary to process all EOS science data for which it is responsible, including interdisciplinary investigator processing. It shall be possible to effectively utilize the entire reprocessing capacity at each site on computers with similar architectural design (e.g., parallel processors), for a single algorithm or any mix of algorithms normally run at that site. The four times processing capacity accounts for: a. 1 times to allow for normal processing demands b. 2 times to allow for reprocessing demands c. 1 times to allow for algorithm integration and test demands, production of prototype products, ad hoc processing for "dynamic browse" or new search and access techniques developed by science users, and additional loads due to spacecraft overlap.	RQMT will be phased so that processing capacity will be provided following 2 years after MSN launch.	S-DPS-60230	A	The SPRHW CI shall provide a phased capacity to support: a. for pre-launch AI&T at launch minus 2 years: 0.3 X, where X is defined as the at-launch processing estimate b. for pre-launch AI&T and System I&T at-launch minus 1 year: 1.2 X, where X is defined as the at-launch processing estimate c. for post-launch AIT, standard processing, and reprocessing, starting at launch plus 1 year: 2.2 X, where X is defined as the standard processing estimate for that period d. for post-launch AIT, standard processing, and reprocessing, starting at launch plus 2 years: 4.2 X, where X is defined as the standard processing estimate for that period.
			S-DPS-60242	B	The SPRHW CI processing shall be sized in accordance with processing requirements derived from Appendix E (Section E.2 Table E-2) of the current version of 304-CD-005.
			S-DPS-60240	A	The SPRHW CI shall support a total processing requirement as derived from Table E-1 of Appendix E of the current version of 304-CD-002 for Release A and Appendix E of the current version of 304-CD-005 for Release B.
PGS-1301#A	The effective CPU processing rates used for sizing purposes in PGS-1300 shall not be greater than 25% of peak-related CPU capacity.	A: TRMM	S-DPS-60240	A	The SPRHW CI shall support a total processing requirement as derived from Table E-1 of Appendix E of the current version of 304-CD-002 for Release A and Appendix E of the current version of 304-CD-005 for Release B.
PGS-1301#B	The effective CPU processing rates used for sizing purposes in PGS-1300 shall not be greater than 25% of peak-related CPU capacity.	B: AM-1, COLOR	S-DPS-60242	B	The SPRHW CI processing shall be sized in accordance with processing requirements derived from Appendix E (Section E.2 Table E-2) of the current version of 304-CD-005.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
			S-DPS-60240	A	The SPRHW CI shall support a total processing requirement as derived from Table E-1 of Appendix E of the current version of 304-CD-002 for Release A and Appendix E of the current version of 304-CD-005 for Release B.
PGS-1310#A	The processing capacity necessary to process all EOS science data for which each PGS is responsible shall be based on the data volumes and at-launch instrument processing load requirements (MFLOPS) assigned to each DAAC.	A: TRMM	S-DPS-60240	A	The SPRHW CI shall support a total processing requirement as derived from Table E-1 of Appendix E of the current version of 304-CD-002 for Release A and Appendix E of the current version of 304-CD-005 for Release B.
PGS-1310#B	The processing capacity necessary to process all EOS science data for which each PGS is responsible shall be based on the data volumes and at-launch instrument processing load requirements (MFLOPS) assigned to each DAAC.	B: AM-1, COLOR RQMT will be phased so that processing capacity will be provided follo wing 2 years after MSN launch	S-DPS-60242	B	The SPRHW CI processing shall be sized in accordance with processing requirements derived from Appendix E (Section E.2 Table E-2) of the current version of 304-CD-005.
			S-DPS-60240	A	The SPRHW CI shall support a total processing requirement as derived from Table E-1 of Appendix E of the current version of 304-CD-002 for Release A and Appendix E of the current version of 304-CD-005 for Release B.
PGS-1315#A	Each PGS shall have the capacity to support I/O to temporary and intermediate storage or multiple passes over input products as required by individual science algorithms.	A: TRMM	S-DPS-60330	IR1	The SPRHW CI shall have the capacity to support I/O to temporary and intermediate storage or multiple passes over input Products as required by individual science software.
PGS-1315#B	Each PGS shall have the capacity to support I/O to temporary and intermediate storage or multiple passes over input products as required by individual science algorithms.	B: AM-1, COLOR	S-DPS-60330	IR1	The SPRHW CI shall have the capacity to support I/O to temporary and intermediate storage or multiple passes over input Products as required by individual science software.
PGS-1315#Ir1	Each PGS shall have the capacity to support I/O to temporary and intermediate le passes over input products as required by individual science algorithms.	IR1: Applies only to disc capacity for staging and intermediate storage, not bandwidth.	S-DPS-60330	IR1	The SPRHW CI shall have the capacity to support I/O to temporary and intermediate storage or multiple passes over input Products as required by individual science software.

PGS RbR to L4 traceability

L3 RbR ID	L3 RbR Text	Interpretation	L4 ID	Rel	L4 Rqmt Text
PGS-1400#A	The PGS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development and integration of new algorithms developed at each DAAC to support DAAC value-added production.		S-PLS-01610	A	The PLANG CI shall be developed with configuration controlled APIs that will be capable of supporting development and integration of new algorithms developed at DAAC to support DAAC value-added production.
			S-DPS-20010	A	The PRONG CI shall be developed with configuration-controlled Application Programming Interfaces (APIs) to support the development and integration of DAAC value-added processing.
PGS-1400#B	The PGS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development and integration of new algorithms developed at each DAAC to support DAAC value-added production.		S-PLS-01610	A	The PLANG CI shall be developed with configuration controlled APIs that will be capable of supporting development and integration of new algorithms developed at DAAC to support DAAC value-added production.
			S-DPS-21860	B	The PRONG CI HMI Functions shall be accessible via an API (Application Program Interface).
			S-DPS-20010	A	The PRONG CI shall be developed with configuration-controlled Application Programming Interfaces (APIs) to support the development and integration of DAAC value-added processing.
PGS-1410#B	The PGS shall provide the capability for each DAAC to add to the data production environment toolkit DAAC-developed software required to support discipline specific needs.		S-DPS-20020	B	The PRONG CI shall have the capability to incorporate DAAC-developed software required to support discipline specific needs.
221			1529		